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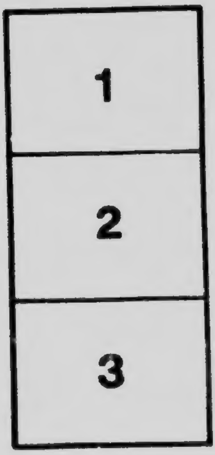

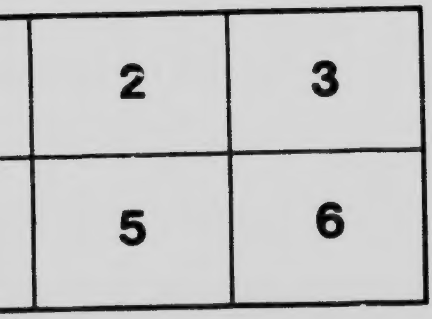

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From an engraving by Hollyer

POE'S COTTAGE AT FORDHAM

TAMERLANE EDITION

# THE WORKS OF
# EDGAR ALLAN POE

TEN VOLS. IN FIVE

*with an introduction by*
EDWIN MARKHAM

## VOLUME FIVE

ESSAYS, PHILOSOPHY
CRITICISM AND MISCELLANY
INDEX

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# VOLUME V—PART I

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# EUREKA

## AN ESSAY ON

## THE MATERIAL AND SPIRITUAL UNIVERSE

[Published as "Eureka: A Prose Poem," Geo. P. Putnam, New York, 1848, and dedicated to Alexander von Humboldt.]

[To the few who love me and whom I love—to those who feel rather than to those who think—to the dreamers and those who put faith in dreams as in the only realities—I offer this Book of Truths, not in its character of Truth-Teller, but for the Beauty that abounds in its Truth; constituting it true. To these I present the composition as an Art-Product alone:—let us say as a Romance; or, if I be not urging too lofty a claim, as a Poem.

*What I here propound is true:*—therefore it cannot die:—or if by any means it be now trodden down so that it die, it will "rise again to the Life Everlasting."

Nevertheless it is as a Poem only that I wish this work to be judged after I am dead.]

It is with humility really unassumed—it is with a sentiment even of awe—that I pen the opening sentence of this work: for of all conceivable subjects I approach the reader with the most solemn—the most comprehensive—the most difficult—the most august.

What terms shall I find sufficiently simple in their sublimity—sufficiently sublime in their simplicity—for the mere enunciation of my theme?

I design to speak of the *Physical, Metaphysical and Mathematical—of the Material and Spiritual Universe:—of its Essence, its Origin, its Creation, its Present Condition and its Destiny.* I shall be so rash, moreover, as to challenge the conclusions, and thus, in effect, to question the sagacity, of many of the greatest and most justly reverenced of men.

In the beginning, let me as distinctly as possible announce—not the theorem which I hope to demonstrate—for, whatever the mathematicians may assert, there is, in this world at least, *no such thing* as demonstration—but the ruling idea which, throughout this volume, I shall be continually endeavoring to suggest.

My general proposition, then, is this:—*In the Original Unity of the First Thing lies the Secondary Cause of All Things, with the Germ of their Inevitable Annihilation.*

In illustration of this idea, I propose to take such a survey of the Universe that the mind may be able to receive and to perceive an individual impression.

He who from the top of Ætna casts his eyes leisurely around, is affected chiefly by the *extent* and *diversity* of the scene. Only by a rapid whirling on his heel could he hope to comprehend the panorama in the sublimity of its *oneness.* But as, on the summit of Ætna, *no* man has thought of whirling on his heel, so no man has ever taken into his brain the full uniqueness of the prospect; and so, again, whatever considerations lie involved in this uniqueness, have as yet no practical existence for mankind.

I do not know a treatise in which a survey of the *Universe*—using the word in its most comprehensive and only legitimate acceptation—is taken at all:—and it may be as well here to mention that by the term "Universe," wherever employed without qualification in this essay, I mean to designate *the utmost conceivable expanse of space, with all things, spiritual and material, that can be imagined to exist within the compass of that expanse.* In speaking of what is *ordinarily* implied by the expression, "Universe," I shall take a phrase of limitation—"the Universe of stars." Why this distinction is considered necessary, will be seen in the sequel.

But even of treatises on the really limited, although always assumed as the *un*limited, Universe of *stars,* I know none in which a survey, even of this limited Universe, is so taken as to warrant deductions from its *individuality.* The nearest approach to such a work is made in the "Cosmos" of Alexander von Humboldt. He presents the subject, however, *not* in its individuality but in its generality. His theme, in its last result, is the law of *each* portion of the merely physical Universe, as this law is related to the laws of *every other* portion of this merely physical Universe. His design is simply synæretical. In a word, he discusses the universality of material relation, and discloses to the eye of Philosophy whatever inferences have hitherto lain hidden *behind* this universality. But however admirable be the succinctness with which he has treated each particular point of his topic, the mere multiplicity of these points occasions, necessarily, an amount of detail, and thus an involution of idea, which preclude all *individuality* of impression.

It seems to me that, in aiming at this latter effect, and, through it, at the consequences—the conclusions—the suggestions—the speculations—or, if nothing better offer itself, the mere guesses which may result from it—we require something like a mental gyration on the heel. We need so rapid a revolution of all things about the central point of sight that, while the minutiæ vanish altogether, even the more conspicuous objects become blended into one. Among the vanishing minutiæ, in a survey of this kind, would be all exclusively terrestrial matters. The Earth would be considered in its planetary relations alone. A man, in this view, becomes mankind; mankind a member of the cosmical family of Intelligences.

And now, before proceeding to our subject proper, let me beg the reader's attention to an extract or two from a somewhat remarkable letter,* which appears to have been found corked in a bottle and floating on the *Mare Tenebrarum*—an ocean well described by the Nubian geographer, Ptolemy Hephestion, but little frequented in modern days unless by the Transcendentalists and some other divers for crotchets. The date of this letter, I confess, surprises me even more particularly than its contents; for it seems to have been written in the year *two* thousand eight hundred and forty-eight. As for the passages I am about to transcribe, they, I fancy, will speak for themselves.

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* See tale, "Mellonta Tauta," vol. III., present edition.—EDITOR.

"Do you know, my dear friend," says the writer, addressing, no doubt, a contemporary—"Do you know that it is scarcely more than eight or nine hundred years ago since the metaphysicians first consented to relieve the people of the singular fancy that there exist *but two practicable roads to Truth?* Believe it if you can! It appears, however, that long, long ago, in the night of Time, there lived a Turkish philosopher called Aries and surnamed Tottle." [Here, possibly, the letter-writer means Aristotle; the best names are wretchedly corrupted in two or three thousand years.] "The fame of this great man depended mainly upon his demonstration that sneezing is a natural provision, by means of which over-profound thinkers are enabled to expel superfluous ideas through the nose; but he obtained a scarcely less valuable celebrity as the founder, or at all events as the principal propagator, of what was termed the *de*ductive or *a priori* philosophy. He started with what he maintained to be axioms, or self-evident truths:—and the now well-understood fact that *no* truths are *self*-evident, really does not make in the slightest degree against his speculations:—it was sufficient for his purpose that the truths in question were evident at all. From axioms he proceeded, logically, to results. His most illustrious disciples were one Tuclid, a geometrician," [meaning Euclid] "and one Kant, a Dutchman, the originator of that species of Transcendentalism which, with the change merely of a C for a K, now bears his peculiar name.

"Well, Aries Tottle flourished supreme, until the advent of one Hog, surnamed 'the Ettrick shepherd,' who preached an entirely different system, which he called the *a posteriori* or *inductive*. His plan referred altogether to sensation. He proceeded by observing, analyzing, and classifying facts—*instantiæ Naturæ*, as they were somewhat affectedly called—and arranging them into general laws. In a word, while the mode of Aries rested on *noumena*, that of Hog depended on *phenomena;* and so great was the admiration excited by this latter system that, at its first introduction, Aries fell into general disrepute. Finally, however, he recovered ground, and was permitted to divide the empire of Philosophy with his more modern rival:—the savans contenting themselves with proscribing all *other* competitors, past, present, and to come; putting an end to all controversy on the topic by the promulgation of a Median law, to the effect that the Aristotelian and Baconian roads are, and of right ought to be, the sole possible avenues to knowledge:—'Baconian,' you must know, my dear friend," adds the letter-writer at this point, "was an adjective invented as equivalent to Hog-ian, and at the same time more dignified and euphonious.

"Now I do assure you most positively"—proceeds the epistle—"that I represent these matters fairly; and you can easily understand how restrictions so absurd on their very face must have operated, in those days, to retard the progress of true Science, which makes its most important advances—as all History will show—by seemingly intuitive *leaps.* These ancient ideas confined investigation to crawling; and I need not suggest to you that crawling, among varieties of locomotion, is a very capital thing of its kind;—but because the tortoise is sure of foot, for this reason must we clip the wings of the eagles? For many centuries, so great was the infatuation, about Hog especially, that a virtual stop was put to all thinking, properly so called. No man dared utter a truth for which he felt himself indebted to his soul alone. It mattered not whether the truth was even demonstrably such; for the dogmatizing philosophers of that epoch regarded only *the road* by which it professed to have been attained. The end, with them, was a point of no moment, whatever:—'the means!' they vociferated—'let us look at the means!'—and if, on scrutiny of the means, it was found to come neither under the category Hog, nor under the category Aries (which means ram), why then the savans went no farther, but, calling the thinker a fool and branding him a 'theorist,' would never, thenceforward, have any thing to do either with *him* or with his truths.

"Now, my dear friend," continued the letter-writer, "it cannot be maintained that by the crawling system exclusively adopted, men would arrive at the maximum amount of truth, even in any long series of ages; for the repression of imagination was an evil not to be counterbalanced even by *absolute* certainty in the snail processes. But their certainty was very far from absolute. The error of our progenitors was quite analogous with that of the wiseacre who fancies he must necessarily see an object the more distinctly, the more closely he holds it to his eyes. They blinded themselves, too, with the impalpable, titillating Scotch snuff of *detail;* and thus the boasted facts of the Hog-ites were by no means always facts—a point of little importance but for the assumption that they always *were.* The vital taint, however, in Baconianism—its most lamentable fount of error—lay in its tendency to throw power and consideration into the hands of merely perceptive men—of those inter-Tritonic minnows, the microscopical savans—the diggers and pedlers of minute *facts,* for the most part in physical science—facts, all of which they retailed at the same price upon the highway; their value depending, it was supposed, simply upon the *fact of their fact,* without reference to their applicability or inapplicability in the development of those ultimate and only legitimate facts, called Law.

"Than the persons"—the letter goes on to say—"than the persons thus suddenly elevated by the Hog-ian philosophy into a station for which they were unfitted—thus transferred from the sculleries into the parlors of Science—from its pantries into its pulpits—than these individuals a more intolerant—a more intolerable set of bigots and tyrants never existed on the face of the earth. Their creed, their text, and their sermon were, alike, the one word '*fact*'—but, for the most part, even of this one word, they knew not even the meaning. On those who ventured to *disturb* their facts with the view of putting them in order and to use, the disciples of Hog had no mercy whatever. All attempts at generalization were met at once by the words 'theoretical,' 'theory,' 'theorist'—all *thought,* to be brief, was very properly resented as a personal affront to themselves. Cultivating the natural sciences to the exclusion of Metaphysics, the Mathematics, and Logic, many of these Bacon-engendered philosophers—one-idead, one-sided, and lame of a leg—were more wretchedly helpless—more miserably ignorant, in view of all the comprehensible objects of knowledge, than the veriest unlettered hind who proves that he knows something at least, in admitting that he knows absolutely nothing.

"Nor had our forefathers any better right to talk about *certainty,* when pursuing, in blind confidence, the *a priori* path of axioms, or of the Ram. At innumerable points this path was scarcely as straight as a ram's-horn. The simple truth is, that the Aristotelians erected their castles upon a basis far less reliable than air; *for no such things as axioms ever existed or can pos-*

*sibly exist at all.* This they must have been very blind indeed not to see, or at least to suspect; for even in their own day, many of their long-admitted 'axioms' had been abandoned: '*ex nihilo nihil fit,*' for example, and a 'thing cannot act where it is not,' and 'there cannot be antipodes,' and 'darkness cannot proceed from light.' These and numerous similar propositions formerly accepted, without hesitation, as axioms, or undeniable truths, were, even at the period of which I speak, seen to be altogether untenable:—how absurd in these people, then, to persist in relying upon a basis, as immutable, whose mutability had become so repeatedly manifest!

"But, even through evidence afforded by themselves against themselves, it is easy to convict these *a priori* reasoners of the grossest unreason—it is easy to show the futility—the impalpability of their axioms in general. I have now lying before me"—it will be observed that we still proceed with the letter—"I have now lying before me a book printed about a thousand years ago. Pundit assures me that it is decidedly the cleverest ancient work on its topic, which is 'Logic.' The author, who was much esteemed in his day, was one Miller, or Mill; and we find it recorded of him, as a point of some importance, that he rode a mill-horse whom he called Jeremy Bentham:—but let us glance at the volume itself.

"Ah!—'Ability or inability to conceive,' says Mr. Mill, very properly, 'is *in no case* to be received as a criterion of axiomatic truth.' Now, that this is a palpable truism, no one in his senses will deny. *Not* to admit the proposition, is to insinuate a charge of variability in Truth itself, whose very title is a synonym of the Steadfast. If ability to conceive be taken as a criterion of Truth, then a truth to *David* Hume would very seldom be a truth to *Joe;* and ninety-nine hundredths of what is undeniable in Heaven, would be demonstrable falsity upon Earth. The proposition of Mr. Mill, then, is sustained. I will not grant it to be an *axiom;* and this merely because I am showing that *no* axioms exist; but, with a distinction which could not have been cavilled at even by Mr. Mill himself, I am ready to grant that, *if* an axiom *there be,* then the proposition of which we speak has the fullest right to be considered an axiom—that no *more* absolute axiom *is*—and, consequently, that any subsequent proposition which shall conflict with this one primarily advanced, must be either a falsity in itself—that is to say, no axiom—or, if admitted axiomatic, must at once neutralize both itself and its predecessor.

"And now, by the logic of their own propounder, let us proceed to test any one of the axioms propounded. Let us give Mr. Mill the fairest of play. We will bring the point to no ordinary issue. We will select for investigation no common-place axiom—no axiom of what, not the less preposterously because only impliedly, he terms his secondary class—as if a positive truth by definition could be either more or less positively a truth: we will select, I say, no axiom of an unquestionability so questionable as is to be found in Euclid. We will not talk, for example, about such propositions as that two straight lines cannot enclose a space, or that the whole is greater than any one of its parts. We will afford the logician *every* advantage. We will come at once to a proposition which he regards as the acme of the unquestionable—as the quintessence of axiomatic undeniability. Here it is:—'Contradictions cannot *both* be true—that is, cannot coexist in nature.'" Here Mr. Mill means for instance,—and I give the most forcible instance conceivable,—that a tree must be either a tree or *not* a tree—that it cannot be at the same time a tree *and* not a tree: all which is quite reasonable of itself, and will answer remarkably well as an axiom, until we bring it into collation with an axiom insisted upon a few pages before; in other words—words which I have previously employed—until we test it by the logic of its own propounder. 'A tree,' Mr. Mill asserts, 'must be either a tree or *not* a tree.' Very well: and now let me ask him, *why*. To this little query there is but one response—I defy any man living to invent a second. The sole answer is this:—'Because we find it *impossible to conceive* that a tree can be anything else than a tree or not a tree.' This, I repeat, is Mr. Mill's sole answer—he will not *pretend* to suggest another; and yet, by his own showing, his answer is clearly no answer at all—for has he not already required us to admit, *as an axiom*, that ability or inability to conceive, is *in no case* to be taken as a criterion of axiomatic truth? Thus all—absolutely *all* his argumentation is at sea without a rudder. Let it not be urged that an exception from the general rule is to be made, in cases where the 'impossibility to conceive' is so peculiarly great as when we are called upon to conceive a tree *both* a tree and *not* a tree. Let no attempt, I say, be made at urging this sotticism; for, in the first place, there are no *degrees* of 'impossibility,' and thus no one impossible conception can be *more* peculiarly impossible than another impossible conception: in the second place, Mr. Mill himself—no doubt after thorough deliberation—has most distinctly, and most rationally, excluded all opportunity for exception, by the emphasis of his proposition, that, *in no case,* is ability or inability to conceive, to be taken as a criterion of axiomatic truth: in the third place, even were exceptions admissible at all, it remains to be shown how any exception is admissible *here.* That a tree can be both a tree and not a tree, is an idea which the angels, or the devils, *may* entertain, and which no doubt many an earthly Bedlamite, or Transcendentalist, *does.*

"Now I do not quarrel with these ancients," continues the letter-writer, "*so much* on account of the transparent frivolity of their logic—which, to be plain, was baseless, worthless, and fantastic altogether—as on account of their pompous and infatuate proscription of all *other* roads to Truth than the two narrow and crooked paths—the one of creeping and the other of crawling—to which, in their ignorant perversity, they have dared to confine the Soul—the Soul which loves nothing so well as to soar in those regions of illimitable intuition which are utterly incognizant of '*path.*'

"By the by, my dear friend, is it not an evidence of the mental slavery entailed upon those bigoted people by their Hogs and Rams, that in spite of the eternal prating of their savans about *roads* to Truth, none of them fell, even by accident, into what we now so distinctly perceive to be the broadest, the straightest, and most available of all mere roads—the great thoroughfare—the majestic highway of the *Consistent?* Is it not wonderful that they should have failed to deduce from the works of God the vitally momentous consideration that *a perfect consistency can be nothing but an absolute truth?* How plain—how rapid our progress since the late announcement of this proposition! By its means, investigation has been taken out of the hands of the groundmoles, and given as a duty, rather than as a task, to the true—to the *only* true thinkers—to the generally-educated men of ardent imagination. These latter—our Keplers—our Laplaces—'speculate'—'theorize'—these are the terms—can you not fancy the shout of scorn with which they would be received by our progenitors, were it possible for them to be looking over my shoulders as I write? The Keplers, I repeat, speculate—theorize—and their theories are merely corrected—reduced—sifted—cleared, little by little, of their chaff of inconsistency—until at length there stands apparent an unencumbered *Consistency*—a consistency which the most stolid admit—because it *is* a consistency—to be an absolute and unquestionable *Truth.*

"I have often thought, my friend, that it must have puzzled these dogmaticians of a thousand years ago, to determine, even, by which of their two boasted roads it is that the cryptographist attains the solution of the more complicated cyphers—or by which of them Champollion guided mankind to those important and innumerable truths which, for so many centuries, have lain entombed amid the phonetical hieroglyphics of Egypt. In especial, would it not have given these bigots some trouble to determine by which of their two roads was reached the most momentous and sublime of *all* their truths—the truth—the fact of *gravitation?* Newton deduced it from the laws of Kepler. Kepler admitted that these laws he *guessed*—these laws whose investigation disclosed to the greatest of British astronomers that principle, the basis of all (existing) physical principles, in going behind which we enter at once the nebulous kingdom of metaphysics. Yes!—these vital laws Kepler *guessed*—that is to say, he *imagined* them. Had he been asked to point out either the *de*ductive or *in*ductive route by which he attained them, his reply might have been—'I know nothing about *routes*—but I *do* know the machinery of the Universe. Here it is. I grasped it with *my soul*—I reached it through mere dint of *intuition.*' Alas, poor ignorant old man! Could not any metaphysician have told him that what he called 'intuition' was but the conviction resulting from *de*ductions or *in*ductions of which the processes were so shadowy as to have escaped his consciousness, eluded his reason, or bidden defiance to his capacity of expression? How great a pity it is that some 'moral philosopher' had not enlightened him about all this! How it would have comforted him on his death-bed to know that, instead of having gone intuitively, and thus unbecomingly, he had, in fact, proceeded decorously and legitimately—that is to say Hog-ishly, or at least Ram-ishly—into the vast halls where lay gleaming, untended, and hitherto untouched by mortal hand—unseen by mortal eye—the imperishable and priceless secrets of the Universe!

"Yes, Kepler was essentially a *theorist;* but this title, *now* of so much sanctity, was, in those ancient days, a designation of supreme contempt. It is only *now* that men begin to appreciate that divine old man—to sympathize with the prophetical and poetical rhapsody of his ever memorable words. For *my* part," continues the unknown correspondent, "I glow with a sacred fire when I even think of them, and feel that I shall never grow weary of their repetition:—in concluding this letter, let me have the real pleasure of transcribing them once again:—'*I care not whether my work be read now or by posterity. I can afford to wait a century for readers when God himself has waited six thousand years for an observer. I triumph. I have stolen the golden secret of the Egyptians. I will indulge my sacred fury.*'"

Here end my quotations from this very unaccountable and, perhaps, somewhat impertinent epistle; and perhaps it would be folly to comment, in any respect, upon the chimerical, not to say revolutionary, fancies of the writer—whoever he is—fancies so radically at war with the well-considered and well-settled opinions of this age. Let us proceed, then, to our legitimate thesis, *The Universe.*

This thesis admits a choice between two modes of discussion:—We may *as*cend or *de*scend. Beginning at our own point of view, at the Earth on which we stand, we may pass to the other planets of our system, thence to the Sun, thence to our system considered collectively, and thence, through other systems, indefinitely outwards; or, commencing on high at some point as definite as we can make it or conceive it, we may come down to the habitation of Man. Usually, that is to say, in ordinary essays on Astronomy, the first of these two modes is, with certain reservation, adopted: this for the obvious reason that astronomical *facts,* merely, and principles, being the object, that object it best fulfilled in stepping from the known because proximate, gradually onward to the point where all certitude becomes lost in the remote. For my present purpose, however, that of enabling the mind to take in, as if from afar and at one glance, a distant conception of the *individual* Universe—it is clear that a descent to small from great—to the outskirts from the centre (if we could establish a centre)—to the end from the beginning (if we could fancy a beginning) would be the preferable course, but for the difficulty, if not impossibility, of presenting, in this course, to the unastronomical, a picture at all comprehensible in regard to such considerations as are involved in *quantity*—that is to say, in number, magnitude and distance.

Now, distinctness—intelligibility, at all points, is a primary feature in my general design. On important topics it is better to be a good deal prolix than even a very little obscure. But abstruseness is a quality appertaining to no subject *per se.* All are alike, in facility of comprehension, to him who approaches them by properly graduated steps. It is merely because a stepping-stone, here and there, is heedlessly left unsupplied in our road to Differential Calculus, that this latter is not altogether as simple a thing as a sonnet by Mr. Solomon Seesaw.

By way of admitting, then, no *chance* for misapprehension, I think it advisable to proceed as if even the more obvious facts of Astronomy were unknown to the reader. In combining the two modes of discussion to which I have referred, I propose to avail myself of the advantages peculiar to each—and very especially of the *iteration in detail* which will be unavoidable as a consequence of the plan. Commencing with a descent, I shall reserve for the return upwards those indispensable considerations of *quantity* to which allusion has already been made.

Let us begin, then, at once, with that merest of words, "Infinity." This, like "God," "spirit," and some other expressions of which the equivalents exist in all languages, is by no means the expression of an idea, but of an effort at one. It stands for the possible attempt at an impossible conception. Man needed a term by which to point out the *direction* of this effort—the cloud behind which lay, forever invisible, the *object* of this attempt. A word, in fine, was demanded, by means of which one human being might put himself in relation at once with another human being and with a certain *tendency* of the human intellect. Out of this demand arose the word, "Infinity;" which is thus the representative but of the *thought of a thought.*

As regards *that* infinity now considered—the infinity of space—we often hear it said that "its idea is admitted by the mind—is acquiesced in—is entertained—on account of the greater difficulty which attends the conception of a limit." But this is merely one of those *phrases* by which even profound thinkers, time out of mind, have occasionally taken pleasure in deceiving *themselves.* The quibble lies concealed in the word "difficulty." "The mind," we are told, "entertains the idea of *limitless,* through the greater *difficulty* which it finds in entertaining that of *limited,* space." Now, were the proposition but fairly *put,* its absurdity would become transparent at once. Clearly, there is no mere *difficulty* in the case. The assertion intended, if presented *according* to its intention, and without sophistry, would run thus:—"The mind admits the idea of limitless, through the greater *impossibility* of entertaining that of limited space."

It must be immediately seen that this is not a question of two statements between whose respective credibilities—or of two arguments between whose respective validities—the *reason* is called upon to decide: it is a matter of two conceptions, directly conflicting, and each avowedly impossible, one of which the *intellect* is supposed to be capable of entertaining, on account of the greater *impossibility* of entertaining the other. The choice is *not* made between two difficulties; it is merely *fancied* to be made between two impossibilities. Now of the former, there *are* degrees, but of the latter, none:—just as our impertinent letter-writer has already suggested. A task *may* be more or less difficult; but it is either possible or not possible—there are no gradations. It *might* be more *difficult* to overthrow the Andes than an ant-hill; but it *can* be no more *impossible* to annihilate the matter of the one than the matter of the other. A man may jump ten feet with less *difficulty* than he can jump twenty, but the *impossibility* of his leaping to the moon is not a whit less than that of his leaping to the dog-star.

Since all this is undeniable: since the choice of the mind is to be made between *impossibilities* of conception: since one impossibility cannot be greater than another: and since, thus, one cannot be preferred to another: the philosophers who not only maintain, on the grounds mentioned, man's *idea* of infinity but, on account of such suppositious idea, *infinity itself*—are plainly engaged in demonstrating one impossible thing to be possible by showing how it is that some one other thing—is impossible too. This, it will be said, is nonsense, and perhaps it is; indeed I think it very capital nonsense, but forego all claim to it as nonsense of mine.

The readiest mode, however, of displaying the fallacy of the philosophical argument on this question, is by simply adverting to a *fact* respecting it which has been hitherto quite overlooked—the fact that the argument alluded to both proves and disproves its own proposition. "The mind is impelled," say the theologians and others, "to admit a *First Cause,* by the superior difficulty it experiences in conceiving cause beyond cause without end." The quibble, as before, lies in the word "difficulty," but *here* what is it employed to sustain? A First Cause. And what is a First Cause? An ultimate termination of causes? And what is an ultimate termination of causes? Finity—the Finite. Thus the one quibble, in two processes, by God knows how many philosophers, is made to support now Finity and now Infinity: could it not be brought to support something besides? As for the quibbles, *they,* at least, are insupportable. But, to dismiss them; what they prove in the one case is the identical nothing which they demonstrate in the other.

Of course, no one will suppose that I here contend for the absolute impossibility of *that* which we attempt to convey in the word "Infinity." My purpose is but to show the folly of endeavoring to prove Infinity itself, or even our conception of it, by any such blundering ratiocination as that which is ordinarily employed.

Nevertheless, as an individual, I may be permitted to say that I *cannot* conceive Infinity, and am convinced that no human being can. A mind not thoroughly self-conscious, not accustomed to the introspective analysis of its own operations, will, it is true, often deceive itself by supposing that it *has* entertained the conception of which we speak. In the effort to entertain it, we proceed step beyond step, we fancy point still beyond point; and so long as we *continue* the effort, it may be said, in fact, that we are *tending* to the formation of the idea designed; while the strength of the impression that we actually form or have formed, is in the ratio of the period during which we keep up the mental endeavor. But it is in the act of discontinuing the endeavor—or fulfilling (as we think) the idea—of putting the finishing stroke (as we suppose) to the conception—that we overthrow at once the whole fabric of our fancy by resting upon some one ultimate, and, therefore, definite point. This fact, however, we fail to perceive, on account of the absolute coincidence, in time, between the settling down upon the ultimate point and the act of cessation in thinking. In attempting, on the other hand, to frame the idea of a *limited* space, we merely converse the processes which involve the impossibility.

We *believe* in a God. We may or may not *believe* in finite or in infinite space; but our belief, in such cases, is more properly designated as *faith*, and is a matter quite distinct from that belief proper—from that *intellectual* belief—which presupposes the mental conception.

The fact is, that, upon the enunciation of any one of that class of terms to which "Infinity" belongs—the class representing *thoughts of thought*—he who has a right to say that he thinks *at all*, feels himself called upon, *not* to entertain a conception, but simply to direct his mental vision toward some given point, in the intellectual firmament, where lies a nebula never to be resolved. To solve it, indeed, he makes no effort; for with a rapid instinct he comprehends, not only the impossibility, but, as regards all human purposes, the *inessentiality* of its solution. He perceives that the Deity has not *designed* it to be solved. He sees, at once, that it lies *out* of the brain of man, and even *how*, if not exactly *why*, it lies out of it. There *are* people, I am aware, who, busying themselves in attempts at the unattainable, acquire very easily, by dint of the jargon they emit, among those thinkers-that-they-think with whom darkness and depth are synonymous, a kind of cuttle-fish reputation for profundity; but the finest quality of Thought is its self-cognizance; and with some little equivocation, it may be said that no fog of the mind can well be greater than that which, extending to the very boundaries of the mental domain, shuts out even these boundaries themselves from comprehension.

It will now be understood that, in using the phrase, "Infinity of Space," I make no call upon the reader to entertain the impossible conception of an *absolute* infinity. I refer simply to the *"utmost conceivable expanse"* of space—a shadowy and fluctuating domain, now shrinking, now swelling, in accordance with the vacillating energies of the imagination.

*Hitherto,* the Universe of stars has always been considered as coincident with the Universe proper, as I have defined it in the commencement of this Discourse. It has been always either directly or indirectly assumed—at least since the dawn of intelligible Astronomy—that, were it possible for us to attain any given point in space, we should still find, on all sides of us, an interminable succession of stars. This was the untenable idea of Pascal when making perhaps the most successful attempt ever made, at periphrasing the conception for which we struggle in the word "Universe." "It is a sphere," he says, "of which the centre is everywhere, the circumference, nowhere." But although this intended definition is, in fact, *no* definition of the Universe of *stars,* we may accept it, with some mental reservation, as a definition (rigorous enough for all practical purposes) of the Universe *proper*—that is to say, of the Universe of *space.* This latter, then, let us regard as *"a sphere of which the centre is everywhere, the circumference nowhere."* In fact, while we find it impossible to fancy an *end* to space, we have no difficulty in picturing to ourselves any one of an infinity of *beginnings.*

As our starting point, then, let us adopt the

*Godhead.* Of this Godhead, *in itself,* he alone is not imbecile—he alone is not impious who propounds——nothing. "*Ncus ne connaissons rien,*" says the Baron de Bielfeld—"*Nous ne connaissons rien de la nature ou de l'essence de Dieu:—pour savior ce qu'il est, il faut être Dieu même.*"—"We know absolutely *nothing* of the nature or essence of God:—in order to comprehend what He is, we should have to be God ourselves."

"*We should have to be God ourselves!*"—With a phrase so startling as this yet ringing in my ears, I nevertheless venture to demand if this our present ignorance of the Deity is an ignorance to which the soul is *everlastingly* condemned.

By *Him,* however—*now,* at least, the Incomprehensible—by Him—assuming him as *Spirit* —that is to say, as *not Matter*—a distinction which, for all intelligible purposes, will stand well instead of a definition—by Him, then, existing as Spirit, let us content ourselves, to-night, with supposing to have been *created,* or made out of Nothing, by dint of his Volition—at some point of Space which we will take as the centre —at some period into which we do not pretend to inquire, but at all events immensely remote —by Him, then again, let us suppose to have been created——*what?* This is a vitally momentous epoch in our considerations. *What* is it that we are justified—that alone we are justified in supposing to have been, primarily and solely, created?

We have attained a point where only *Intuition* can aid us:—but now let me recur to the idea which I have already suggested as that alone which we can properly entertain of intuition. It is but *the conviction arising from those inductions or deductions of which the processes are so shadowy as to escape our consciousness, elude our reason, or defy our capacity of expression.* With this understanding, I now assert—that an intuition altogether irresistible, although inexpressible, forces me to the conclusion that what God originally created—that that Matter which, by dint of his Volition, he first made from his Spirit, or from Nihility, *could* have been nothing but Matter in its utmost conceivable state of——what?—of *Simplicity?*

This will be found the sole absolute *assumption* of my Discourse. I use the word "assumption" in its ordinary sense; yet I maintain that even this my primary proposition, is very, very far indeed, from being really a mere assumption. Nothing was ever more certainly—no human conclusion was ever, in fact, more regularly—more rigorously *de*duced:—but, alas! the processes lie out of the human analysis—at all events are beyond the utterance of the human tongue.

Let us now endeavor to conceive what Matter must be, when, or if, in its absolute extreme of *Simplicity*. Here the Reason flies at once to Imparticularity—to a particle—to *one* particle—a particle of *one* kind—of *one* character—of *one* nature—of *one size*—of one form—a particle, therefore, "*without* form and void"—a particle positively a particle at all points—a particle absolutely unique, individual, undivided, and not indivisible only because He who *created* it, by dint of his Will, can by an infinitely less energetic exercise of the same Will, as a matter of course, divide it.

*Oneness,* then, is all that I predicate of the originally created Matter; but I propose to show that this *Oneness is a principle abundantly sufficient to account for the constitution, the existing phænomena and the plainly inevitable annihilation of at least the material Universe.*

The willing into being the primordial particle, has completed the act, or more properly the *conception* of Creation. We now proceed to the ultimate purpose for which we are to suppose the Particle created—that is to say, the ultimate purpose so far as our considerations *yet* enable us to see it—the constitution of the Universe from it, the Particle.

This constitution has been effected by *forcing* the originally and therefore normally *One* into the abnormal condition of *Many.* An action of this character implies reaction. A diffusion from Unity, under the conditions, involves a tendency to return into Unity—a tendency ineradicable until satisfied. But on these points I will speak more fully hereafter.

The assumption of absolute Unity in the primordial Particle includes that of infinite divisibility. Let us conceive the Particle, then, to be only not totally exhausted by diffusion into Space. From the one Particle, as a centre, let us suppose to be irradiated spherically—in all directions—to immeasurable but still definite distances in the previously vacant space—a certain inexpressibly great yet limited number of unimaginably yet not infinitely minute atoms.

Now, of these atoms, thus diffused, or upon diffusion, what conditions are we permitted—not to assume, but to infer, from consideration as well of their source as of the character of the design apparent in their diffusion? *Unity* being their source, and *difference from Unity* the character of the design manifested in their diffusion, we are warranted in supposing this character to be at least *generally* preserved throughout the design, and to form a portion of the design itself: —that is to say, we shall be warranted in conceiving continual differences at all points from the uniquity and simplicity of the origin. But, for these reasons, shall we be justified in imagining the atoms heterogeneous, dissimilar, unequal, and inequidistant? More explicitly—are we to consider no two atoms as, at their diffusion, of the same nature, or of the same form, or of the same size?—and, after fulfilment of their diffusion into Space, is absolute inequidistance, each from each, to be understood of all of them? In such arrangement, under such conditions, we most easily and immediately comprehend the subsequent most feasible carrying out to completion of any such design as that which I have suggested—the design of variety out of unity—diversity out of sameness—heterogeneity out of homogeneity—complexity out of simplicity—in a word, the utmost possible multiplicity of *relation* out of the emphatically irrelative *One.* Undoubtedly, therefore, we *should* be warranted in assuming all that has been mentioned, but for the reflection, first, that supererogation is not presumable of any Divine Act; and, secondly, that the object supposed in view, appears as feasible when some of the conditions in question are dispensed with, in the beginning, as when all are understood immediately to exist. I mean to say that some are involved in the rest, or so instantaneous a consequence of them as to make the distinction inappreciable. Difference of *size,* for example, will at once be brought about through the tendency of one atom to a second, in preference to a third, on account of particular inequidistance; which is to be comprehended as *particular inequidistances between centres of quantity, in neighboring atoms of different form*—a matter not at all interfering with the generally-equable distribution of the atoms. Difference of *kind,* too, is easily conceived to be merely a result of differences in size and form, taken more or less conjointly:—in fact, since the *Unity* of the Particle Proper implies absolute homogeneity, we cannot imagine the atoms, at their diffusion, differing in kind, without imagining, at the same time, a special exercise of the Divine Will, at the emission of each atom, for the purpose of effecting, in each, a change of its essential nature:—so fantastic an idea is the less to be indulged, as the object proposed is seen to be thoroughly attainable without such minute and elaborate interposition. We perceive, therefore, upon the whole, that it would be supererogatory, and consequently unphilosophical, to predicate of the atoms, in view of their purposes, any thing more than *difference of form* at their dispersion, with particular inequidistance after it—all other differences arising at once out of these, in the very first processes of mass-constitution:—We thus establish the Universe on a purely *geometrical* basis. Of course, it is by no means necessary to assume absolute difference, even of form, among *all* the atoms irradiated—any more than absolute particular inequidistance of each from each. We are required to conceive merely that no *neighboring* atoms are of similar form—no atoms which can ever approximate, until their inevitable reunition at the end.

Although the immediate and perpetual *tendency* of the disunited atoms to return into their normal Unity, is implied, as I have said, in their abnormal diffusion, still it is clear that this tendency will be without consequence—a tendency and no more—until the diffusive energy, in ceasing to be exerted, shall leave *it,* the tendency, free to seek its satisfaction. The Divine Act, however, being considered as determinate, and discontinued on fulfilment of the diffusion, we understand, at once, a *reaction*—in other words, a *satisfiable* tendency of the disunited atoms to return into *One.*

But the diffusive energy being withdrawn, and the reaction having commenced in furtherance of the ultimate design—*that of the utmost possible*

*Relation*—this design is now in danger of being frustrated, in detail, by reason of that very tendency to return which is to effect its accomplishment in general. *Multiplicity* is the object; but there is nothing to prevent proximate atoms from lapsing *at once*, through the now satisfiable tendency—*before* the fulfilment of any ends proposed in multiplicity—into absolute oneness among themselves:—there is nothing to impede the aggregation of various *unique* masses, at various points of space:—in other words, nothing to interfere with the accumulation of various masses, each absolutely One.

For the effectual and thorough completion of the general design, we thus see the necessity for a repulsion of limited capacity—a separative *something* which, on withdrawal of the diffusive Volition, shall at the same time allow the approach, and forbid the junction, of the atoms; suffering them infinitely to approximate, while denying them positive contact; in a word, having the power—*up to a certain epoch*—of preventing their *coalition*, but no ability to interfere with their *coalescence* in any respect or *degree*. The repulsion, already considered as so peculiarly limited in other regards, must be understood, let me repeat, as having power to prevent absolute coalition, *only up to a certain epoch*. Unless we are to conceive that the appetite for Unity among the atoms is doomed to be satisfied *never;*—unless we are to conceive that what had a beginning is to have an end—a conception which cannot *really* be entertained, however much we may talk or dream of entertaining it—we are forced to conclude that the repulsive influence imagined, will, finally—under pressure of the *Uni-tendency collectively* applied, but never and in no degree *until*, on fulfilment of the Divine purposes, such collective application shall be naturally made—yield to a force which, at that ultimate epoch, shall be the superior force precisely to the extent required, and thus permit the universal subsidence into the inevitable, because original and therefore normal, *One*. The conditions here to be reconciled are difficult indeed:—we cannot even comprehend the possibility of their conciliation;—nevertheless, the apparent impossibility is brilliantly suggestive.

That the repulsive something actually exists, *we see*. Man neither employs, nor knows, a force sufficient to bring two atoms into contact. This is but the well-established proposition of the impenetrability of matter. All Experiment proves—all Philosophy admits it. The *design* of the repulsion—the necessity for its existence—I have endeavored to show; but from all attempt at investigating its nature have religiously abstained; this on account of an intuitive conviction that the principle at issue is strictly spiritual—lies in a recess impervious to our present understanding—lies involved in a consideration of what now—in our human state—is *not* to be considered—in a consideration of *Spirit in itself*. I feel, in a word, that here the God has interposed, and here only, because here and here only the knot demanded the interposition of the God.

In fact, while the tendency of the diffused atoms to return into Unity, will be recognised, at once, as the principle of the Newtonian Gravity, what I have spoken of as a repulsive influence prescribing limits to the (immediate) satisfaction of the tendency, will be understood as *that* which we have been in the practice of designating now as heat, now as magnetism, now as *electricity;* displaying our ignorance of its awful character in the vacillation of the phraseology with which we endeavor to circumscribe it.

Calling it, merely for the moment, electricity, we know that all experimental analysis of electricity has given, as an ultimate result, the principle, or seeming principle, *heterogeneity. Only* where things differ, is electricity apparent; and it is presumable that they *never* differ where it is not developed at least, if not apparent. Now, this result is in the fullest keeping with that which I have reached unempirically. The design of the repulsive influence I have maintained to be that of preventing immediate Unity among the diffused atoms; and these atoms are represented as different each from each. *Difference* is their character—their essentiality—just as *no-difference* was the essentiality of their course. When we say, then, that an attempt to bring any two of these atoms together would induce an effort, on the part of the repulsive influence, to prevent the contact, we may as well use the strictly convertible sentence that an attempt to bring together any two differences will result in a development of electricity. All existing bodies, of course, are composed of these atoms in proximate contact, and are therefore to be considered as mere assemblages of more or fewer differences; and the resistance made by the repulsive spirit, on bringing together any two such assemblages, would be in the ratio of the two sums of the differences in each:—an expression which, when reduced, is equivalent to this:—*The amount of electricity developed on the approximation of two bodies, is proportional to the difference between the respective sums of the atoms of which the bodies are composed.* That *no* two bodies are absolutely alike, is a simple corollary from all that has been here said. Electricity, therefore, existing always, is *developed* whenever *any* bodies, but *manifested* only when bodies of appreciable difference, are brought into approximation.

To electricity—so, for the present, continuing to call it—we *may* not be wrong in referring the various physical appearances of light, heat and magnetism; but far less shall we be liable to err in attributing to this strictly spiritual principle the more important phænomena of vitality, consciousness and *Thought.* On this topic, however, I need pause *here* merely to suggest that these phænomena, whether observed generally or in detail, seem to proceed *at least in the ratio of the heterogeneous.*

Discarding now the two equivocal terms, "gravitation" and "electricity," let us adopt the more definite expressions, *"attraction"* and *"repulsion."* The former is the body; the latter the soul: the one is the material; the other the spiritual, principle of the Universe. *No other principles exist. All* phænomena are referable to one, or to the other, or to both combined. So rigorously is this the case—so thoroughly demonstrable is it that attraction and repulsion are the *sole* properties through which we perceive the Universe—in other words, by which Matter is manifested to Mind—that, for all merely argumentative purposes, we are fully justified in assuming that matter *exists* only as attraction and repulsion—that attraction and repulsion *are* matter:—there being no conceivable case in which we may not employ the term "matter" and the terms "attraction" and "repulsion," taken together, as equivalent, and therefore convertible, expressions in Logic.

I said, just now, that what I have described as the tendency of the diffused atoms to return into their original unity, would be understood as the principle of the Newtonian law of gravity; and, in fact, there can be but little difficulty in such an understanding, if we look at the Newtonian gravity in a merely general view, as a force impelling matter to seek matter; that is to say, when we pay no attention to the known *modus operandi* of the Newtonian force. The general coincidence satisfies us; but, upon looking closely, we see, in detail, much that appears *in*coincident, and much in regard to which no coincidence, at least, is established. For example: the Newtonian gravity, when we think of it in certain moods, does *not* seem to be a tendency to *oneness* at all, but rather a tendency of all bodies in all directions—a phrase apparently expressive of a tendency to diffusion. Here, then, is an *in*coincidence. Again; when we reflect on the mathematical *law* governing the Newtonian tendency, we see clearly that no coincidence has been made good, in respect of the *modus operandi,* at least, between gravitation as known to exist and that seemingly simple and direct tendency which I have assumed.

In fact, I have attained a point at which it will be advisable to strengthen my position by reversing my processes. So far, we have gone on *a priori,* from an abstract consideration of *Simplicity,* as that quality most likely to have characterized the original action of God. Let us now see whether the established facts of the Newtonian Gravitation may not afford us, *a posteriori,* some legitimate inductions.

What does the Newtonian law declare? That all bodies attract each other with forces proportional to the squares of their distances. Purposely, I have given, in the first place, the vulgar version of the law; and I confess that in this, as in most other vulgar versions of great truths, we find little of a suggestive character. Let us now adopt a more philosophical phraseology:—*Every atom, of every body, attracts every other atom, both of its own and of every other body, with a force which varies inversely as the squares of the distances between the attracting and attracted atom*. Here, indeed, a flood of suggestion bursts upon the mind.

But let us see distinctly what it was that Newton *proved*—according to the grossly irrational definitions of *proof* prescribed by the metaphysical schools. He was forced to content himself with showing how thoroughly the motions of an imaginary Universe, composed of attracting and attracted atoms obedient to the law he announced, coincide with those of the actually existing Universe so far as it comes under our observation. This was the amount of his *demonstration*—that is to say, this was the amount of it, according to the conventional cant of the "philosophies." His successes added proof multiplied by proof—such proof as a sound intellect admits—but the *demonstration* of the law itself, persist the metaphysicians, had not been strengthened in any degree. "*Ocular, physical* proof," however, of attraction, here upon Earth, in accordance with the Newtonian theory, was, at length, much to the satisfaction of some intellectual grovellers, afforded. This proof arose collaterally and incidentally (as nearly all important truths have arisen) out of an attempt to ascertain the mean density of the Earth. In the famous Maskelyne, Cavendish and Bailly experiments for this purpose, the attraction of the mass of a mountain was seen, felt, measured, and found to be mathematically consistent with the immortal theory of the British astronomer.

But in spite of this confirmation of that which needed none—in spite of the so-called corroboration of the "theory" by the so-called "ocular and physical proof"—in spite of the *character* of this corroboration—the ideas which even really philosophical men cannot help imbibing of gravity—and, especially, the ideas of it which ordinary men get and contentedly maintain, are *seen* to have been derived, for the most part, from a consideration of the principle as they find it developed—*merely in the planet upon which they stand.*

Now, to what does so partial a consideration tend—to what species of error does it give rise? On the Earth we *see* and *feel* only that gravity impels all bodies towards the *centre* of the Earth. No man in the common walks of life could be *made* to see or feel anything else—could be made to perceive that anything, anywhere, has a perpetual, gravitating tendency in any *other* direction than to the centre of the Earth; yet (with an exception hereafter to be specified) it is a fact that every earthly thing (not to speak now of every heavenly thing) has a tendency not *only* to the Earth's centre but in every conceivable direction besides.

Now, although the philosophic cannot be said to *err with* the vulgar in this matter, they nevertheless permit themselves to be influenced, without knowing it, by the *sentiment* of the vulgar idea. "Although the Pagan fables are not believed," says Bryant, in his very erudite "Mythology," yet we forget ourselves continually and make inferences from them as from existing realities." I mean to assert that the merely *sensitive perception* of gravity as we experience it on Earth, beguiles mankind into the fancy of *concentralization* or *especiality* respecting it—has been continually biasing towards this fancy even the mightiest intellects—perpetually, although imperceptibly, leading them away from the real characteristics of the principle; thus preventing them, up to this date, from ever getting a glimpse of that vital truth which lies in a diametrically opposite direction—behind the principle's *essential* characteristics—those, *not* of concentralization or especiality--but of *universality* and *diffusion.* This "vital truth" is *Unity* as the *source* of the phænomenon.

Let me now repeat the definition of gravity:—*Every atom, of every body, attracts every other atom, both of its own and of every other body,* with a force which varies inversely as the squares of the distances of the attracting and attracted atom.

Here let the reader pause with me, for a moment, in contemplation of the miraculous—of the ineffable—of the altogether unimaginable complexity of relation involved in the fact that *each atom attracts every other atom*—involved merely in this fact of the attraction, without reference to the law or mode in which the attraction is manifested—involved *merely* in the fact that each atom attracts every other atom *at all,* in a wilderness of atoms so numerous that those which go to the composition of a cannon-ball, exceed, probably, in mere point of number, all the stars which go to the constitution of the Universe.

Had we discovered, simply, that each atom tended to some one favorite point—to some especially attractive atom—we should still have fallen upon a discovery which, in itself, would have sufficed to overwhelm the mind:—but what is it that we are actually called upon to comprehend? That each atom attracts—sympathizes with the most delicate movements of every other atom, and with each and with all at the same time, and forever, and according to a determinate law of which the complexity, even considered by itself solely, is utterly beyond the grasp of the imagination of man. If I propose to ascertain the influence of one mote in a sunbeam upon its neighboring mote, I cannot accomplish my purpose without first counting and weighing all the atoms in the Universe, and defining the precise positions of all at one particular moment. If I venture to displace, by even the billionth part of an inch, the microscopical speck of dust which lies now upon the point of my finger, what is the character of that act upon which I have adventured? I have done a deed which shakes the Moon in her path, which causes the Sun to be no longer the sun, and which alters forever the destiny of the multitudinous myriads of stars that roll and glow in the majestic presence of their Creator.

*These* ideas—conceptions such as *these*—unthoughtlike thoughts—soul-reveries rather than conclusions or even considerations of the intellect:—ideas, I repeat, such as these, are such as we can alone hope profitably to entertain in any effort at grasping the great principle, *Attraction*.

But now, *with* such ideas—with such a *vision* of the marvellous complexity of Attraction fairly in his mind—let any person competent of thought on such topics as these, set himself to the task of imagining a *principle* for the phænomena observed—a condition from which they sprang.

Does not so evident a brotherhood among the atoms point to a common parentage? Does not a sympathy so omniprevalent, so ineradicable, and so thoroughly irrespective, suggest a common paternity as its source? Does not one extreme impel the reason to the other? Does not the infinitude of division refer to the utterness of individuality? Does not the entireness of the complex hint at the perfection of the simple? It is *not* that the atoms, as we see them, are divided or that they are complex in their relations—but that they are inconceivably divided and unutterably complex: it is the extremeness of the conditions to which I now allude, rather than to the conditions themselves. In a word, is it not because the atoms were, at some remote epoch of time, even *more than together*—is it not because originally, and therefore normally, they were *One*—that now, in all circumstances—at all points—in all directions—by all modes of approach—in all relations and through all conditions—they struggle *back* to this absolutely, this irrelatively, this unconditionally *one?*

Some person may here demand:—"Why—since it is to the *One* that the atoms struggle back—do we not find and define Attraction 'a merely general tendency to a centre?'—why, in especial, do not *your* atoms—the atoms which you describe as having been irradiated from a centre—proceed at once, rectilinearly, back to the central point of their origin?"

I reply that *they do;* as will be distinctly shown; but that the cause of their so doing is quite irrespective of the centre *as such.* They all tend rectilinearly towards a centre, because of the sphericity with which they have been irradiated into space. Each atom, forming one of a generally uniform globe of atoms, finds more atoms in the direction of the centre, of course, than in any other, and in that direction, therefore, is impelled—but is *not* thus impelled because the centre is *the point of its origin.* It is not to any *point* that the atoms are allied. It is not any *locality,* either in the concrete or in the abstract, to which I suppose them bound. Nothing like *location* was conceived as their origin. Their source lies in the principle, *Unity. This* is their lost parent. *This* they seek always—immediately—in all directions—wherever it is even partially to be found; thus appeasing, in some measure, the ineradicable tendency, while on the way to its absolute satisfaction in the end. It follows from all this, that any principle which shall be adequate to account for the *law,* or *modus operandi,* of the attractive force in general, will account for this law in particular:—that is to say, any principle which will show why the atoms should tend to their *general centre of irradiation* with forces inversely proportional to the squares of the distances will be admitted as satisfactorily accounting, at the same time, for the tendency, according to the same law, of these atoms each to each;—*for* the tendency to the centre *is* merely the tendency each to each, and not any tendency to a centre as such.—Thus it will be seen, also, that the establishment of my propositions would involve no *necessity* of modification in the terms of the Newtonian definition of Gravity, which declares that each atom attracts each other atom and so forth, and declares this merely; but (always under the supposition that what I propose be, in the end, admitted) it seems clear that some error might occasionally be avoided, in the future processes of Science, were a more ample phraseology adopted:—for instance:—"Each atom tends to every other atom, &c., with a force &c.: *the general result being a tendency of all, with a similar force, to a general centre.*"

The reversal of our processes has thus brought us to an identical result; but while in the one process *intuition* was the starting point, in the other it was the goal. In commencing the former journey I could only say that, with an irresistible intuition, I *felt* Simplicity to have been made the characteristic of the original action of God:—in ending the letter I can only declare that with an irresistible intuition, I perceive Unity to have been the source of the observed phænomena of the Newtonian gravitation. Thus, according to the schools, I *prove* nothing. So be it:—I design but to suggest—and to *convince* through the suggestion. I am proudly aware that there exist many of the most profound and cautiously discriminative human intellects which cannot *help* being abundantly content with my—suggestions. To these intellects—as to my own—there is no mathematical demonstration which *could* bring the least additional *true proof* of the great *Truth* which I have advanced—*the truth of Original Unity as the source—as the principle of the Universal Phænomena.* For my part I am not sure that I speak and see—I am not so sure that my heart beats and that my soul lives:—of the rising of to-morrow's sun—a probability that as yet lies in the Future—I do not pretend to be one thousandth part as sure—as I am of the irretrievably bygone *Fact* that All Things and All Thoughts of Things, with all their ineffable Multiplicity of Relation, sprang at once into being from the primordial and irrelative *One.*

Referring to the Newtonian Gravity, Dr. Nichol, the eloquent author of "The Architecture of the Heavens," says:—"In truth we have no reason to suppose this great Law, as now revealed, to be the ultimate or simplest, and therefor the universal and all-comprehensive, form of a great Ordinance. The mode in which its intensity diminishes with the element of distance, has not the aspect of an ultimate *principle*; which always assumes the simplicity and self-evidence of those axioms which constitute the basis of Geometry."

Now, it is quite true that "ultimate principles," in the common understanding of the words, always assume the simplicity of geometrical axioms—(as for "self-evidence," there is no such thing)—but these principles are clearly *not* "ultimate;" in other terms, what we are in the habit of calling principles are no principles, properly speaking—since there can be but one *principle*, the Volition of God. We have no right to assume, then, from what we observe in rules that we choose foolishly to name "principles," anything at all in respect to the characteristics of a principle proper. The "ultimate principles" of which Dr. Nichol speaks as having geometrical simplicity, may and do have this geometrical turn, as being part and parcel of a vast geometrical system, and thus a system of simplicity itself—in which, nevertheless, the *truly* ultimate principle is, *as we know,* the consummation of the complex—that is to say, of the unintelligible—for is it not the Spiritual Capacity of God?

I quoted Dr. Nichol's remark, however, not so much to question its philosophy, as by way of calling attention to the fact that while all men have admitted *some* principle as existing behind the law of Gravity, no attempt has been yet made to point out what this principle in particular *is*:—if we except, perhaps, occasional fantastic efforts at referring it to Magnetism, or Mesmerism, or Swedenborgianism, or Transcendentalism, or some other equally delicious *ism* of the same species, and invariably patronized by one and the same species of people. The great mind of Newton, while boldly grasping the Law itself, shrank from the principle of the Law. The more fluent and comprehensive at least, if not the more patient and profound, sagacity of Laplace, had not the courage to attack it. But hesitation on the part of these two astronomers it is, perhaps, not so very difficult to understand. They, as well as all the first class of mathematicians, were mathematicians *solely*:—their intellect at least had a firmly-pronounced mathematico-physical tone. What lay not distinctly within the domain of Physics, or of Mathematics, seemed to them either Non-Entity or Shadow. Nevertheless, we may well wonder that Leibnitz, who was a marked exception to the general rule in these respects, and whose mental temperament was a singular admixture of the mathematical with the physico-metaphysical, did not at once investigate and establish the point at issue. Either Newton or Laplace, seeking a principle and discovering none *physical*, would have rested contentedly in the conclusion that there was absolutely none; but it is almost impossible to fancy, of Leibnitz, that, having exhausted in his search the physical dominions, he would not have stepped at once, boldly and hopefully, amid his old familiar haunts in the kingdom of Metaphysics. Here, indeed, it is clear that he *must* have adventured in search of the treasure:—that he did not find it after all, was, perhaps, because his fairy guide, Imagination, was not sufficiently well-grown, or well-educated, to direct him aright.

I observed, just now, that, in fact, there had been certain vague attempts at referring Gravity to some very uncertain *isms*. These attempts, however, although considered bold, and justly so considered, looked no farther than to the generality—the merest generality—of the Newtonian Law. Its *modus operandi* has never, to my knowledge, been approached in the way of an effort at explanation. It is therefore, with no unwarranted fear of being taken for a madman at the outset, and before I can bring my propositions fairly to the eye of those who alone are competent to decide upon them, that I here declare the *modus operandi* of the Law of Gravity to be an exceedingly simple and perfectly explicable thing—that is to say, when we make our advances towards it in just gradations and in the true direction—when we regard it from the proper point of view.

Whether we reach the idea of absolute *Unity* as the source of All Things, from a consideration of Simplicity as the most probable characteristic of the original action of God;—whether we arrive at it from an inspection of the universality of relation in the gravitating phænomena;—or whether we attain it as a result of the mutual corroboration afforded by both processes;—still, the idea itself, if entertained at all, is entertained in inseparable connection with another idea—that of the condition of the Universe of stars as we *now* perceive it—that is to say, a condition of immeasurable *diffusion* through space. Now a connection between these two ideas—unity and diffusion—cannot be established unless through the entertainment of a third idea—that of *irradiation.* Absolute Unity being taken as a centre, then the existing Universe of stars is the result of *irradiation* from that centre.

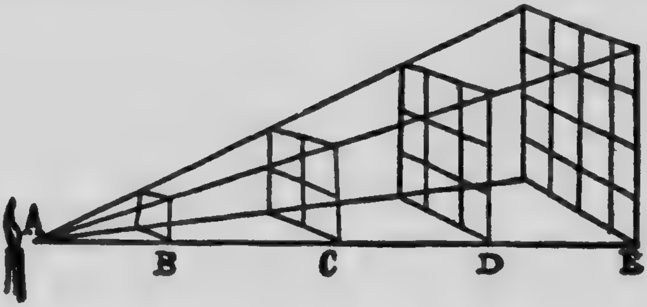
Now, the laws of irradiation are *known*. They are part and parcel of the *sphere*. They belong to the class of *indisputable geometrical properties*. We say of them, "they are true—they are evident." To demand *why* they are true, would be to demand why the axioms are true upon which their demonstration is based. *Nothing* is demonstrable, strictly speaking; but *if* anything *be*, then the properties—the laws in question are demonstrated.

But these laws—what do they declare? Irradiation—how—by what steps does it proceed outwardly from a centre?

From a *luminous* centre, *Light* issues by irradiation; and the quantities of light received upon any given plane, supposed to be shifting its position so as to be now nearer the centre and now farther from it, will be diminished in the same proportion as the squares of the distances of the plane from the luminous body, are increased; and will be increased in the same proportion as these squares are diminished.

The expression of the law may be thus generalized:—the number of light-particles (or, if the phrase be preferred, the number of light-impressions) received upon the shifting plane, will be *inversely* proportional with the squares of the distances of the plane. Generalizing yet again, we may say that the diffusion—the scattering—the irradiation, in a word—is *directly* proportional with the squares of the distances.

For example: at the distance B, from the luminous centre A, a certain number of particles are so diffused as to occupy the surface B. Then at double the distance—that is to say, at C—they will be so much farther diffused as to occupy four such surfaces:—at treble the distance, or at D, they will be so much farther separated as to occupy nine such surfaces;—while, at quadruple the distance, or at E, they will have become so scattered as to spread themselves over sixteen such surfaces—and so on forever.



In saying, generally, that the irradiation proceeds in direct proportion with the squares of the distances, we use the term irradiation to express *the degree of the diffusion* as we proceed outwardly from the centre. Conversing the idea, and employing the word "concentralization," to express *the degree of the drawing together* as we come back toward the centre from an outward position, we may say that concentralization proceeds *inversely* as the squares of the distances. In other words, we have reached the conclusion that, on the hypothesis that matter was originally irradiated from a centre, and is now returning to it, the concentralization, in the return, proceeds *exactly as we know the force of gravitation to proceed.*

Now here, if we could be permitted to assume that concentralization exactly represented the *force of the tendency to the centre*—that the one was exactly proportional to the other, and that the two proceeded together—we should have shown all that is required. The sole difficulty existing, then, is to establish a direct proportion between "concentralization" and the *force* of concentralization; and this is done, of course, if we establish such proportion between "irradiation" and the *force* of irradiation.

A very slight inspection of the Heavens assures us that the stars have a certain general uniformity, equability, or equidistance, of distribution through that region of space in which, collectively, and in a roughly globular form, they are situated:—this species of very general, rather than absolute, equability, being in full keeping with my deduction of inequidistance, within certain limits, among the originally diffused atoms, as a corollary from the evident design of infinite complexity of relation out of irrelation. I started, it will be remembered, with the idea of a generally uniform but particularly *un*uniform distribution of the atoms;—an idea, I repeat, which an inspection of the stars, as they exist, confirms.

But even in the merely general equability of distribution, as regards the atoms, there appears a difficulty which, no doubt, has already suggested itself to those among my readers who have borne in mind that I suppose this equability of distribution effected through *irradiation from a centre.* The very first glance at the idea, irradiation, forces us to the entertainment of the hitherto unseparated and seemingly inseparable idea of agglomeration about a centre, with dispersion as we recede from it—the idea, in a word, of *in*equability of distribution in respect to the matter irradiated.

Now, I have elsewhere* observed, that it is by just such difficulties as the one now in question—such roughnesses—such peculiarities—such protuberances above the plane of the ordinary—that Reason feels her way, if at all, in her search for the True. By the difficulty—the "peculiarity"—now presented, I leap at once to *the* secret—a secret which I might never have attained *but* for the peculiarity and the inferences which, *in its mere character of peculiarity,* it affords me.

The process of thought, at this point, may be thus roughly sketched:—I say to myself—"Unity, as I have explained it, is a truth—I feel it. Diffusion is a truth—I see it. Irradiation, by which alone these two truths are reconciled, is a consequent truth—I perceive it. *Equability* or diffusion, first deduced *a priori* and then corroborated by the inspection of phænomena, is also a truth—I fully admit it. So far all is clear around me:—there are no clouds behind which *the* secret—the great secret of the gravitating *modus operandi*—can possibly lie hidden;—but this secret lies *hereabouts*, most assuredly; and *were* there but a cloud in view, I should be driven to suspicion of that cloud." And now, just as I say this, there actually comes a cloud into view. This cloud is the seeming impossibility of reconciling my truth, *irradiation*, with my truth, *equability of diffusion*. I say now:—"Behind this *seeming* impossibility is to be found what I desire." I do not say "*real* impossibility;" for invincible faith in my truths assures me that it is a mere difficulty after all; but I go on to say, with unflinching confidence, that, *when* this *difficulty* shall be solved, we shall find, *wrapped up in the process of solution*, the key to the secret at which we aim. Moreover—I *feel* that we shall discover *but one* possible solution of the difficulty; this for the reason that, were there two, one would be supererogatory—would be fruitless—would be empty—would contain no key—since no duplicate key can be needed to any secret of Nature.

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* "Murders in the Rue Morgue"—vol. IV., present edition.

And, now, let us see:—Our usual notions of irradiation—in fact, *all* our distinct notions of it—are caught merely from the process as we see it exemplified in *Light*. Here there is a *continuous* outpouring of *ray-streams*, and *with a force which we have at least no right to suppose varies at all*. Now, in any such irradiation *as this*—continuous and of unvarying force—the regions nearer the centre must *inevitably* be always more crowded with the irradiated matter than the regions more remote. But I have assumed *no* such irradiation *as this*. I assumed no *continuous* irradiation; and for the simple reason that such an assumption would have involved, first, the necessity of entertaining a conception which I have shown no man *can* entertain, and which (as I will more fully explain hereafter) all observation of the firmament refutes—the conception of the absolute infinity of the Universe of stars—and would have involved, secondly, the impossibility of understanding a reaction—that is, gravitation—as existing now—since, while an act is continued, no reaction, of course, can take place. My assumption, then, or rather my inevitable deduction from just premises—was that of a *determinate* irradiation—one finally *dis*continued.

Let me now describe the sole possible mode in which it is conceivable that matter could have been diffused through space, so as to fulfil the conditions at once of irradiation and of generally equable distribution.

For convenience of illustration, let us imagine, in the first place, a hollow sphere of glass, or of anything else, occupying the space throughout which the universal matter is to be thus equally diffused, by means of irradiation, from the absolute, irrelative, unconditional particle, placed in the centre of the sphere.

Now, a certain exertion of the diffusive power (presumed to be the Divine Volition)—in other words, a certain *force*—whose measure is the quantity of matter—that is to say, the number of atoms—emitted; emits, by irradiation, this certain number of atoms; forcing them in all directions outwardly from the centre—their proximity to each other diminishing as they proceed—until, finally, they are distributed, loosely, over the interior surface of the sphere.

When these atoms have attained this position, or while proceeding to attain it, a second and inferior exercise of the same force—or a second and inferior force of the same character—emits, in the same manner—that is to say, by irradiation as before—a second stratum of atoms which proceeds to deposit itself upon the first; the number of atoms, in this case as in the former, being of course the measure of the force which emitted them; in other words, the force being precisely adapted to the purpose it affects—the force, and the number of atoms sent out by the force, being *directly proportional.*

When this second stratum has reached its destined position—or while approaching it—a third still inferior exertion of the force, or a third inferior force of a similar character—the number of atoms emitted being in *all* cases the measure of the force—proceeds to deposit a third stratum upon the second:—and so on, until these concentric strata, growing gradually less and less, come down at length to the central point; and the diffusive matter, simultaneously with the diffusive force, is exhausted.

We have now the sphere filled, through means of irradiation, with atoms equably diffused. The two necessary conditions—those of irradiation and of equable diffusion—are satisfied; and by the *sole* process in which the possibility of their simultaneous satisfaction is conceivable. For this reason, I confidently expect to find, lurking in the present condition of the atoms as distributed throughout the sphere, the secret of which I am in search—the all-important principle of the *modus operandi* of the Newtonian law. Let us examine, then, the actual condition of the atoms.

They lie in a series of concentric strata. They are equably diffused throughout the sphere. They have been irradiated into these states.

The atoms being *equably* distributed, the greater the superficial extent of any of these concentric strata or spheres, the more atoms will lie upon it. In other words, the number of atoms lying upon the surface of any one of the concentric spheres, is directly proportional with the extent of that surface.

*But, in any series of concentric spheres, the surfaces are directly proportional with the squares of the distances from the centre.**

Therefore the number of atoms in any stratum is directly proportional with the square of that stratum's distance from the centre.

But the number of atoms in any stratum is the measure of the force which emitted that stratum—that is to say, is *directly proportional* with the force.

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* Succinctly—The surfaces of spheres are as the squares of their radii.

Therefore the force which irradiated any stratum is directly proportional with the square of that stratum's distance from the centre:—or, generally,

*The force of the irradiation has been directly proportional with the squares of the distances.*

Now, Reaction, as far as we know any thing of it, is Action conversed. The *general* principle of Gravity being, in the first place, understood as the reaction of an act—as the expression of a desire on the part of Matter, while existing in a state of diffusion, to return into the Unity whence it was diffused; and, in the second place, the mind being called upon to determine the *character* of the desire—the manner in which it would, naturally, be manifested; in other words, being called upon to conceive a probable law, or *modus operandi,* for the return; could not well help arriving at the conclusion that this law of return would be precisely the converse of the law of departure. That such would be the case, any one, at least, would be abundantly justified in taking for granted, until such time as some person should suggest something like a plausible reason why it should *not* be the case—until such period as a law of return shall be imagined which the intellect can consider as preferable.

Matter, then, irradiated into space with a force varying as the squares of the distances, might *a priori,* be supposed to return towards its centre of irradiation with a force varying *inversely* as the squares of the distances: and I have already shown* that any principle which will explain why the atoms should tend, according to any law, to the general centre, must be admitted as satisfactorily explaining, at the same time, why, according to the same law, they should tend each to each. For, in fact, the tendency to the general centre is not to a centre as such, but because of its being a point in tending towards which each atom tends most directly to its real and essential centre, *Unity*—the absolute and final Union of all.

The consideration here involved presents to my own mind no embarrassment whatever—but this fact does not blind me to the possibility of its being obscure to those who may have been less in the habit of dealing with abstractions: —and, upon the whole, it may be as well to look at the matter from one or two other points of view.

The absolute, irrelative particle primarily created by the Volition of God, must have been in a condition of postive *normality*, or rightfulness—for wrongfulness implies *relation*. Right is positive; wrong is negative—is merely the negation of right; as cold is the negation of heat—darkness of light. That a thing may be wrong, it is necessary that there be some other thing in *relation* to which it *is* wrong—some condition which it fails to satisfy; some law which it violates; some being whom it aggrieves. If there be no such being, law, or condition, in respect to which the thing is wrong—and, still more especially, if no beings, laws, or conditions exist at all—then the thing can*not* be wrong, and consequently must be *right*. Any deviation from normality involves a tendency to return to it. A difference from the normal—from the right—from the just—can be understood as affected only by the overcoming a difficulty; and if the force which overcomes the difficulty be not infinitely continued, the ineradicable tendency to return will at length be permitted to act for its own satisfaction. Upon withdrawal of the force, the tendency acts. This is the principle of reaction as the inevitable consequence of finite action. Employing a phraseology of which the seeming affectation will be pardoned for its expressiveness, we may say that Reaction is the return from the condition of *as it is and ought not to be* into the condition of *as it was, originally, and therefore ought to be*:—and let me add here that the *absolute* force of Reaction would no doubt be always found in direct proportion with the reality—the truth—the absoluteness—of the *originality*—if ever it were possible to measure this latter:—and, consequently, the greatest of all conceivable reactions must be that produced by the tendency which we now discuss—the tendency to return into the *absolutely original*—into the *supremely* primitive. Gravity, then, *must be the strongest of forces*—an idea reached *a priori* and abundantly confirmed by induction. What use I make of the idea, will be seen in the sequel.

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* Page 46.

The atoms, now, having been diffused from their normal condition of Unity, seek to return to——what? Not to any particular *point*, certainly; for it is clear that if, upon the diffusion, the whole Universe of matter had been projected, collectively, to a distance from the point of irradiation, the atomic tendency to the general centre of the sphere would not have been disturbed in the least:--the atoms would not have sought the point *in absolute space* from which they were originally impelled. It is merely the *condition*, and not the point or locality at which this condition took its rise, that these atoms seek to reestablish;—it is merely *that condition which is their normality*, that they desire. "But they seek a centre," it will be said, "and a centre is a point." True; but they seek this point not in its character of point—(for, were the whole sphere moved from its position, they would seek, equally, the centre; and the centre *then* would be a *new point*)—but because it so happens, on account of the form in which they collectively exist—(that of the sphere)—that only *through* the point in question—the sphere's centre—they can attain their true object, Unity. In the direction of the centre each atom perceives more atoms than in any other direction. Each atom is impelled towards the centre because along the straight line joining it and the centre and passing on to the circumference beyond, there lie a greater number of atoms than along any other straight line—a greater number of objects that seek it, the individual atom—a greater number of tendencies to Unity—a greater number of satisfactions for its own tendency to Unity—in a word, because in the direction of the centre lies the utmost possibility of satisfaction, generally, for its own individual appetite. To be brief, the *condition*, Unity, is all that is really sought; and if the atoms *seem* to seek the centre of the sphere, it is only impliedly, through implication—because such centre happens to imply, to include, or to involve, the only essential centre, Unity. But *on account of* this implication or involution, there is no possibility of practically separating the tendency to Unity in the abstract, from the tendency to the concrete centre. Thus the tendency of the atoms to the general centre *is*, to all practical intents and for all logical purposes, the tendency each to each; and the tendency each to each *is* the tendency to the centre; and the one tendency may be assumed *as* the other; whatever will apply to the one must be thoroughly applicable to the other; and, in conclusion, whatever principle will satisfactorily explain the one, cannot be questioned as an explanation of the other.

In looking carefully around me for a rational objection to what I have advanced, I am able to discover *nothing*;—but of that class of objections usually urged by the doubters for Doubt's sake, I very readily perceive *three;* and proceed to dispose of them in order.

It may be said, first: "That the proof that the force of irradiation (in the case described) is directly proportional to the squares of the distances, depends upon an unwarranted assumption—that of the number of atoms in each stratum being the measure of the force with which they are emitted."

I reply, not only that I am warranted in such assumption, but that I should be utterly *un*warranted in any other. What I assume is, simply, that an effect is the measure of its cause—that every exercise of the Divine Will will be proportional to that which demands the exertion—that the means of Omnipotence, or of Omniscience, will be exactly adapted to its purposes. Neither can a deficiency nor an excess of cause bring to pass any effect. Had the force which irradiated any stratum to its position, been either more or less than was needed for the purpose—that is to say, not *directly proportional* to the purpose—then to its position that stratum could not have been irradiated. Had the force which, with a view to general equability of distribution, emitted the proper number of atoms for each stratum, been not *directly proportional* to the number, then the number would *not* have been the number demanded for the equable distribution.

The second supposable objection is somewhat better entitled to an answer.

It is an admitted principle in Dynamics that every body, on receiving an impulse, or disposition to move, will move onward in a straight line, in the direction imparted by the impelling force, until deflected, or stopped, by some other force. How then, it may be asked, is my first or external stratum of atoms to be understood as discontinuing their movement at the circumference of the imaginary glass sphere when no second force, of more than an imaginary character, appears, to account for the discontinuance?

I reply that the objection, in this case, actually does arise out of "an unwarranted assumption"—on the part of the objector—the assumption of a principle, in Dynamics, at an epoch when *no* "principles," in *anything,* exist:—I use the word "principle," of course, in the objector's understanding of the word.

"In the beginning" we can admit—indeed we can comprehend—but one *First Cause*—the truly ultimate *Principle*—the Volition of God. The primary *act*—that of Irradiation from Unity—must have been independent of all that which the world now calls "principle"—because all that we so designate is but a consequence of the reaction of that primary act:—I say "*primary*" act; for the creation of the absolute material particle is more properly to be regarded as a *conception* than as an "*act*" in the ordinary meaning of the term. Thus, we must regard the primary act as an act for the establishment of what we now call "principles." But this primary act itself is to be considered as *continuous Volition.* The Thought of God is to be understood as originating the Diffusion—as proceeding with it—as regulating it—and, finally, as being withdrawn from it upon its completion. *Then* commences Reaction, and through Reaction, "Principle," as we employ the word. It will be advisable, however, to limit the application of this word to the two *immediate* results of the discontinuance of the Divine Volition—that is, to the two agents, *Attraction* and *Repulsion*. Every other Natural agent depends, either more or less immediately, upon these two, and therefore would be more conveniently designated as *sub*-principle.

It may be objected, thirdly, that, in general, the peculiar mode of distribution which I have suggested for the atoms, is "an hypothesis and nothing more."

Now, I am aware that the word hypothesis is a ponderous sledge-hammer, grasped immediately, if not lifted, by all very diminutive thinkers, upon the first appearance of any proposition wearing, in any particular, the garb of *a theory*. But "hypothesis" cannot be wielded *here* to any good purpose, even by those who succeed in lifting it—little men or great.

I maintain, first, that *only* in the mode described is it conceivable that Matter could have been diffused so as to fulfil at once the conditions of irradiation and of generally equable distribution. I maintain, secondly, that these conditions themselves have been imposed upon me, as necessities, in a train of ratiocination *as rigorously logical as that which establishes any demonstration in Euclid;* and I maintain, thirdly, that even if the charge of "hypothesis" were as fully sustained as it is, in fact, unsustained and untenable, still the validity and indisputability of my result would not, even in the slightest particular, be disturbed.

To explain:—The Newtonian Gravity—a law of Nature—a law whose existence as such no one out of Bedlam questions—a law whose admission as such enables us to account for nine-tenths of the Universal phænomena—a law which, merely because it does so enable us to account for these phænomena, we are perfectly willing, without reference to any other considerations, to admit, and cannot help admitting, as a law—a law, nevertheless, of which neither the principle nor the *modus operandi* of the principle, has ever yet been traced by the human analysis—a law, in short, which, neither in its detail nor in its generality, has been found susceptible of explanation *at all*—is at length seen to be at every point thoroughly explicable, provided we only yield our assent to——what? To an hypothesis? Why *if* an hypothesis—if the merest hypothesis—if an hypothesis for whose assumption—as in the case of that *pure* hypothesis the Newtonian law itself—no shadow of *a priori* reason could be assigned—if an hypothesis, even so absolute as all this implies, would enable us to perceive a principle for the Newtonian law—would enable us to understand as satisfied, conditions so miraculously—so ineffably complex and seemingly irreconcilable as those involved in the relations of which Gravity tells us,—what rational being *could* so expose his fatuity as to call even this absolute hypothesis an hypothesis any longer—unless, indeed, he were to persist in so calling it, with the understanding that he did so, simply for the sake of consistency *in words*?

But what is the true state of our present case? What is *the fact?* Not only that is *not* an hypothesis which we are required *to adopt*, in order to admit the principle at issue explained, but that it *is* a logical conclusion which we are requested *not* to adopt if we can avoid it—which we are simply invited to *deny if we can*:—a conclusion of so accurate a logicality that to dispute it would be the effort—to doubt its validity, beyond our power:—a conclusion from which we see no mode of escape, turn as we will; a result which confronts us either at the end of an *inductive* journey from the phænomena of the very Law discussed, or at the close of a *de*ductive career from the most rigorously simple of all conceivable assumptions—*the assumption, in a word, of Simplicity itself*.

And if here, for the mere sake of cavilling, it be urged, that although my starting-point is, as I assert, the assumption of absolute Simplicity, yet Simplicity, considered merely in itself, is no axiom; and that only deductions from axioms are indisputable—it is thus that I reply:—

Every other science than Logic is the science of certain concrete relations. Arithmetic, for example, is the science of the relations of number—Geometry, of the relations of form—Mathematics in general, of the relations of quantity in general—of whatever can be increased or diminished. Logic, however, is the science of Relation in the abstract—of absolute Relation—of Relation considered solely in itself. An axiom in any particular science other than Logic is, thus, merely a proposition announcing certain concrete relations which seem to be too obvious for dispute

—as when we say, for instance, that the whole is greater than its part;—and, thus again, the principle of the *Logical* axiom—in other words, of an axiom in the abstract—is, simply, *obviousness of relation*. Now, it is clear, not only that what is obvious to one mind may not be obvious to another, but that what is obvious to one mind at one epoch, may be anything but obvious, at another epoch, to the same mind. It is clear, moreover, that what, to-day, is obvious even to the majority of mankind, or to the majority of the best intellects of mankind, may to-morrow be, to either majority, more or less obvious, or in no respect obvious at all. It is seen, then, that the *axiomatic principle* itself is susceptible of variation, and of course that axioms are susceptible of similar change. Being mutable, the "truths" which grow out of them are necessarily mutable too; or, in other words, are never to be positively depended upon as truths at all—since Truth and Immutability are one.

It will now be readily understood that no axiomatic idea—no idea founded in the fluctuating principle, obviousness of relation—can possibly be so secure—so reliable a basis for any structure erected by the Reason, as *that* idea—(whatever it is, wherever we can find it, or *if* it be practicable to find it anywhere)—which is *ir*relative altogether—which not only presents to the understanding *no obviousness* of relation, either greater or less, to be considered, but subjects the intellect, not in the slightest degree, to the necessity of even looking at *any relation at all*. If such an idea be not what we too heedlessly term "an axiom," it is at least preferable, as a Logical basis, to any axiom ever propounded, or to all imaginable axioms combined:—and such, precisely, is the idea with which my deductive process, so thoroughly corroborated by induction, commences. My *particle proper* is but *absolute Irrelation.* To sum up what has been advanced:—As a starting point I have taken it for granted, simply, that the Beginning had nothing behind it or before it—that it was a Beginning in fact—that it was a beginning and nothing different from a beginning—in short, that this Beginning was—*that which it was.* If this be a "mere assumption" then a "mere assumption" let it be.

To conclude this branch of the subject:—I am fully warranted in announcing that *the Law which we have been in the habit of calling Gravity exists on account of Matter's having been irradiated, at its origin, atomically, into a limited* sphere of Space, from one, individual, unconditional, irrelative, and absolute Particle Proper, by the sole process in which it was possible to satisfy, at the same time, the two conditions, irradiation, and generally-equable distribution throughout the sphere—that is to say, by a force varying in direct proportion with the squares of the distances between the irradiated atoms, respectively, and the Particular centre of Irradiation.*

I have already given my reasons for presuming Matter to have been diffused by a determinate rather than by a continuous or infinitely continued force. Supposing a continuous force, we should be unable, in the first place, to comprehend a reaction at all; and we should be required, in the second place, to entertain the impossible conception of an infinite extension of Matter. Not to dwell upon the impossibility of the conception, the infinite extension of Matter is an idea which, if not positively disproved, is at least not in any respect warranted by telescopic observation of the stars—a point to be explained more fully hereafter; and this empirical reason for believing in the original finity of Matter is unempirically confirmed. For example:—Admitting, for the moment, the possibility of understanding Space *filled* with the irradiated atoms—that is to say, admitting, as well as we can, for argument's sake, that the succession of the irradiated atoms had absolutely *no end*—then it is abundantly clear that, even when the Volition of God had been withdrawn from them, and thus the tendency to return into Unity permitted (abstractly) to be satisfied, this permission would have been nugatory and invalid—practically valueless and of no effect whatever. No Reaction could have taken place; no movement toward Unity could have been made; no Law of Gravity could have obtained.

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* "Limited sphere"—A sphere is *necessarily* limited. I prefer tautology to a chance of misconception.

To explain:—Grant the *abstract* tendency of any one atom to any one other as the inevitable result of diffusion from the normal Unity:—or, what is the same thing, admit any given atom as *proposing* to move in any given direction—it is clear that, since there is an *infinity* of atoms on all sides of the atom proposing to move, it never can actually move toward the satisfaction of its tendency in the direction given, on account of a precisely equal and counter-balancing tendency in the direction diametrically opposite. In other words, exactly as many tendencies to Unity are behind the hesitating atom as before it; for it is a mere sotticism to say that one infinite line is longer or shorter than another infinite line, or that one infinite number is greater or less than another number that is infinite. Thus the atom in question must remain stationary forever. Under the impossible circumstances which we have been merely endeavoring to conceive for argument's sake, there could have been no aggregation of Matter—no stars—no worlds—nothing but a perpetually atomic and inconsequential Universe. In fact, view it as we will, the whole idea of unlimited Matter is not only untenable, but impossible and preposterous.

With the understanding of a *sphere* of atoms, however, we perceive, at once, a *satisfiable* tendency to union. The general result of the tendency each to each, being a tendency of all to the centre, the *general* process of condensation, or approximation, commences immediately, by a common and simultaneous movement, on withdrawal of the Divine Volition; the *individual* approximations, or coalescences—*not* coalitions—of atom with atom, being subject to almost infinite variations of time, degree, and condition, on account of the excessive multiplicity of relation, arising from the differences of form assumed as characterizing the atoms at the moment of their quitting the Particle Proper; as well as from the subsequent particular inequidistance, each from each.

What I wish to impress upon the reader is the certainty of there arising, at once, (on withdrawal of the diffusive force, or Divine Volition,) out of the condition of the atoms as described, at innumerable points throughout the Universal sphere, innumerable agglomerations, characterized by innumerable specific differences of form, size, essential nature, and distance each from each. The development of Repulsion (Electricity) must have commenced, of course, with the very earliest particular efforts at Unity, and must have proceeded constantly in the ratio of Coalescence—that is to say, *in that of Condensation,* or, again, of Heterogeneity.

Thus the two Principles Proper, *Attraction* and *Repulsion*—the Material and the Spiritual—accompany each other, in the strictest fellowship, forever. Thus, *the Body and the Soul walk hand in hand.*

If now, in fancy, we select *any one* of the agglomerations considered as in their primary stages throughout the Universal sphere, and suppose this incipient agglomeration to be taking place at that point where the centre of our Sun exists—or rather where it *did* exist originally; for the Sun is perpetually shifting his position—we shall find ourselves met, and borne onward for a time at least, by the most magnificent of theories—by the Nebular Cosmogony of Laplace: —although "Cosmogony" is far too comprehensive a term for what he really discusses—which is the constitution of our solar system alone—of one among the myriad of similar systems which make up the Universe Proper—that Universal sphere—that all-inclusive and absolute *Kosmos* which forms the subject of my present Discourse.

Confining himself to an *obviously limited* region—that of our solar system with its comparatively immediate vicinity—and *merely* assuming—that is to say, assuming without any basis whatever, either deductive or inductive—*much* of what I have been just endeavoring to place upon a more stable basis than assumption; assuming, for example, matter as diffused (without pretending to account for the diffusion) throughout, and somewhat beyond, the space occupied by our system—diffused in a state of heterogeneous nebulosity and obedient to that omniprevalent law of Gravity at whose principle he ventured to make no guess; assuming all this (which is quite true, although he had no logical right to its assumption) Laplace has shown, dynamically and mathematically, that the results in such case necessarily ensuing, are those and those alone which we find manifested in the actually existing condition of the system itself.

To explain:—Let us conceive *that* particular agglomeration of which we have just spoken—the one at the point designated by our Sun's centre

—to have so far proceeded that a vast quantity of nebulous matter has here assumed a roughly globular form; its centre being, of course, coincident with what is now, or rather was originally, the centre of our Sun; and its periphery extending out beyond the orbit of Neptune, the most remote of our planets:—in other words, let us suppose the diameter of this rough sphere to be some 6000 millions of miles. For ages, this mass of matter has been undergoing condensation, until at length it has become reduced into the bulk we imagine; having proceeded gradually, of course, from its atomic and imperceptible state, into what we understand of visible, palpable, or otherwise appreciable nebulosity.

Now, the condition of this mass implies a rotation about an imaginary axis—a rotation which, commencing with the absolute incipiency of the aggregation, has been ever since acquiring velocity. The very first two atoms which met, approaching each other from points not diametrically opposite, would, in rushing partially past each other, form a nucleus for the rotary movement described. How this would increase in velocity, is readily seen. The two atoms are joined by others:—an aggregation is formed. The mass continues to rotate while condensing. But any atom at the circumference has, of course, a more rapid motion than one nearer the centre. The outer atom, however, with its superior velocity, approaches the centre; carrying this superior velocity with it as it goes. Thus every *atom*, proceeding inwardly, and finally attaching itself to the condensed centre, adds something to the original velocity of that centre—that is to say, increases the rotary movement of the mass.

Let us now suppose this mass so far condensed that it occupies *precisely* the space circumscribed by the orbit of Neptune, and that the velocity with which the surface of the mass moves, in the general rotation, is precisely that velocity with which Neptune now revolves about the Sun. At this epoch, then, we are to understand that the constantly increasing centrifugal force, having gotten the better of the non-increasing centripetal, loosened and separated the exterior and least condensed stratum, or a few of the exterior and least condensed strata, at the equator of the sphere, where the tangential velocity predominated; so that these strata formed about the main body an independent ring encircling the equatorial regions:—just as the exterior portion thrown off, by excessive velocity of rotation, from a grindstone, would form a ring about the grindstone, but for the solidity of the superficial material: were this caoutchouc, or anything similar in consistency, precisely the phænomenon I describe would be presented.

The ring thus whirled from the nebulous mass, *revolved*, of course, *as* a separate ring, with just that velocity with which, while the surface of the mass, it *rotated*. In the meantime, condensation still proceeding, the interval between the discharged ring and the main body continued to increase, until the former was left at a vast distance from the latter.

Now, admitting the ring to have possessed, by some seemingly accidental arrangement of its heterogeneous materials, a constitution nearly uniform, then this ring, *as* such, would never have ceased revolving about its primary; but, as might have been anticipated, there appears to have been enough irregularity in the disposition of the materials, to make them cluster about centres of superior solidity; and thus the annular form was destroyed.[*] No doubt, the band was soon broken up into several portions, and one of these portions, predominating in mass, absorbed the others into itself; the whole settling, spherically, into a planet. That this latter, *as* a planet, continued the revolutionary movement which characterized it while a ring, is sufficiently clear; and that it took upon itself, also, an additional movement in its new condition of sphere, is readily explained. The ring being understood as yet unbroken, we see that its exterior, while the whole revolves about the parent body, moves more rapidly than its interior. When the rupture occurred, then, some portion in each fragment must have been moving with greater velocity than the others. The superior movement prevailing, must have whirled each fragment round—that is to say, have caused it to rotate; and the direction of the rotation must, of course, have been the direction of the revolution whence it arose. *All* the fragments having become subject to the rotation described, must, in coalescing, have imparted it to the one planet constituted by their coalescence. —This planet was Neptune. Its material continuing to undergo condensation, and the centrifugal force generated in its rotation, getting, at length, the better of the centripetal, as before in the case of the parent orb, a ring was whirled also from the equatorial surface of this planet: this ring, having been uniform in its constitution, was broken up, and its several fragments, being absorbed by the most massive, were collectively spherified into a moon. Subsequently, the operation was repeated, and a second moon was the result. We thus account for the planet Neptune, with the two satellites which accompany him.

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[*] Laplace assumed his nebulosity heterogeneous, merely that he might be thus enabled to account for the breaking up of the rings; for had the nebulosity been homogeneous, they would not have broken. I reach the same result—heterogeneity of the secondary masses immediately resulting from the atoms—purely from an *a priori* consideration of their general design—*Relation*.

In throwing off a ring from its equator, the Sun re-established that equilibrium between its centripetal and centrifugal forces which had been disturbed in the process of condensation; but, as this condensation still proceeded, the equilibrium was again immediately disturbed, through the increase of rotation. By the time the mass had so far shrunk that it occupied a spherical space just that circumscribed by the orbit of Uranus, we are to understand that the centrifugal force had so far obtained the ascendency that new relief was needed: a second equatorial band was, consequently, thrown off, which, proving ununiform, was broken up, as before in the case of Neptune; the fragments settling into the planet

Uranus; the velocity of whose actual revolution about the Sun indicates, of course, the rotary speed of that Sun's equatorial surface at the moment of the separation. Uranus, adopting a rotation from the collective rotations of the fragments composing it, as previously explained, now threw off ring after ring; each of which, becoming broken up, settled into a moon:—three moons, at different epochs, having been formed, in this manner, by the rupture and general spherification of as many distinct ununiform rings.

By the time the Sun had shrunk until it occupied a space just that circumscribed by the orbit of Saturn, the balance, we are to suppose, between its centripetal and contrifugal forces had again become so far disturbed, through increase of rotary velocity, the result of condensation, that a third effort at equilibrium became necessary; and an annular band was therefore whirled off, as twice before; which, on rupture through ununiformity, became consolidated into the planet Saturn. This latter threw off, in the first place, seven uniform bands, which, on rupture, were spherified respectively into as many moons; but, subsequently, it appears to have discharged, at three distinct but not very distant epochs, three rings whose equability of constitution was, by apparent accident, so considerable as to present no occasion for their rupture; thus they continue to revolve as rings. I use the phrase "*apparent* accident;" for of accident in the ordinary sense there was, of course, nothing:—the term is properly applied only to the result of indistinguishable or not immediately traceable *law.*

Shrinking still farther, until it occupied just the space circumscribed by the orbit of Jupiter, the Sun now found need of farther effort to restore the counterbalance of its two forces, continually disarranged in the still continued increase of rotation. Jupiter, accordingly, was now thrown off; passing from the annular to the planetary condition; and, on attaining this latter, threw off in its turn, at four different epochs, four rings, which finally resolved themselves into so many moons.

Still shrinking, until its sphere occupied just the space defined by the orbit of the Asteroids, the Sun now discarded a ring which appears to have had *eight* centres of superior solidity, and, on breaking up, to have separated into eight fragments, no one of which so far predominated in mass as to absorb the others. All therefore, as distinct although comparatively small planets, proceeded to revolve in orbits whose distances, each from each, may be considered as in some degree the measure of the force which drove them asunder:—all the orbits, nevertheless, being so closely coincident as to admit of our calling them *one,* in view of the other planetary orbits.

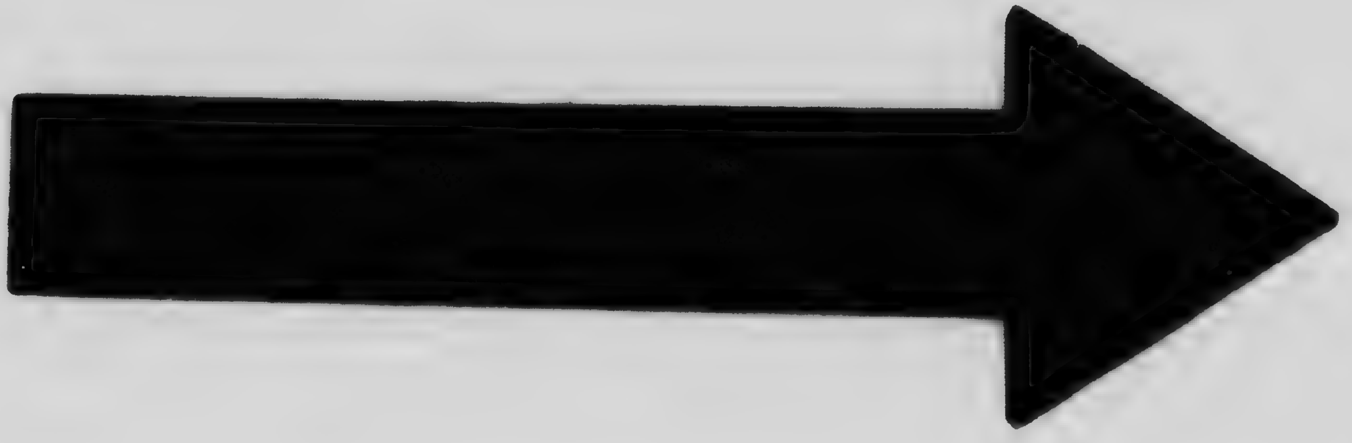
Continuing to shrink, the Sun, on becoming so small as just to fill the orbit of Mars, now discharged this planet—of course by the process repeatedly described. Having no moon, however, Mars could have thrown off no ring. In fact, an epoch had now arrived in the career of the parent body, the centre of the system. The *de*crease of its nebulosity, which is the *in*crease of its density, and which again is the *de*crease of its condensation, out of which latter arose the constant disturbance of equilibrium—must, by this period, have attained a point at which the efforts for restoration would have been more and more ineffectual just in proportion as they were less frequently needed. Thus the processes of which we have been speaking would everywhere show signs of exhaustion—in the planets, first, and secondly, in the original mass. We must not fall into the error of supposing the decrease of interval observed among the planets as we approach the Sun, to be in any respect indicative of an increase of frequency in the periods at which they were discarded. Exactly the converse is to be understood. The longest interval of time must have occurred between the discharges of the two interior; the shortest, between those of the two exterior, planets. The decrease of the interval of space is, nevertheless, the measure of the density, and thus inversely of the condensation, of the Sun, throughout the processes detailed.

Having shrunk, however, so far as to fill only the orbit of our Earth, the parent sphere whirled from itself still one other body—the Earth—in a condition so nebulous as to admit of this body's discarding, in its turn, yet another, which is our Moon;—but here terminated the lunar formations.

Finally, subsiding to the orbits first of Venus and then of Mercury, the Sun discarded these two interior planets; neither of which has given birth to any moon.

Thus from his original bulk—or, to speak more accurately, from the condition in which we first considered him—from a partially spherified nebular mass, *certainly* much more than 5,600 millions of miles in diameter—the great central orb and origin of our solar-planetary-lunar system, has gradually descended, by condensation, in obedience to the law of Gravity, to a globe only 882,000 miles in diameter; but it by no means follows, either that its condensation is yet complete, or that it may not still possess the capacity of whirling from itself another planet.

I have here given—in outline of course, but still with all the detail necessary for distinctness—a view of the Nebular Theory as its author himself conceived it. From whatever point we regard it, we shall find it *beautifully true.* It is by far too beautiful, indeed, *not* to possess Truth as its essentiality—and here I am very profoundly serious in what I say. In the revolution of the satellites of Uranus, there does appear something seemingly inconsistent with the assumptions of Laplace; but that *one* inconsistency can invalidate a theory constructed from a million of intricate consistencies, is a fancy fit only for the fantastic. In prophesying, confidently, that the apparent anomaly to which I refer, will, sooner or later, be found one of the strongest possible corroborations of the general hypothesis, I pretend to no especial spirit of divination. It is a



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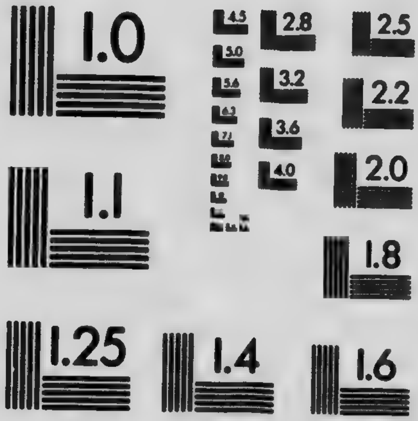

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matter which the only difficulty seems *not* to foresee.*

The bodies whirled off in the processes described, would exchange, it has been seen, the superficial *rotation* of the orbs whence they originated, for a *revolution* of equal velocity about these orbs as distant centres; and the revolution thus engendered must proceed, so long as the centripetal force, or that with which the discarded body gravitates toward its parent, is neither greater nor less than that by which it was discarded; that is, than the centrifugal, or, far more properly, than the tangential, velocity. From the unity, however, of the origin of these two forces, we might have expected to find them as they are found—the one accurately counterbalancing the other. It has been shown, indeed, that the act of whirling-off is, in every case, merely an act for the preservation of the counterbalance.

After referring, however, the centripetal force to the omniprevalent law of Gravity, it has been the fashion with astronomical treatises, to seek beyond the limits of mere Nature—that is to say, of *Secondary* Cause—a solution of the phænomenon of tangential velocity. This latter they attribute directly to a *First* Cause—to God. The force which carries a steller body around its primary they assert to have originated in an impulse given immediately by the finger—this is the childish phraseology employed—by the finger of Deity itself. In this view, the planets, fully formed, are conceived to have been hurled from the Divine hand, to a position in the vicinity of the suns, with an impetus mathematically adapted to the masses, or attractive capacities, of the suns themselves. An idea so grossly unphilosophical, although so supinely adopted, could have arisen only from the difficulty of otherwise accounting for the absolutely accurate adaptation, each to each, of two forces so seemingly independent, one of the other, as are the gravitating and tangential. But it should be remembered that, for a long time, the coincidence between the moon's rotation and her sidereal revolution—two matters seemingly far more independent than those now considered—was looked upon as positively miraculous; and there was a strong disposition, even among astronomers, to attribute the marvel to the direct and continual agency of God—who, in this case, it was said, had found it necessary to interpose, specially, among his general laws, a set of subsidiary regulations, for the purpose of forever concealing from mortal eyes the glories, or perhaps the horrors, of the other side of the Moon—of that mysterious hemisphere which has always avoided, and must perpetually avoid, the telescopic scrutiny of mankind. The advance of Science, however, soon demonstrated —what to the philosophical instinct needed *no* demonstration—that the one movement is but a portion—something more, even, than a consequence—of the other.

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* I am prepared to show that the anomalous revolution of the satellites of Uranus is a simply perspective anomaly arising from the inclination of the axis of the planet.

For my part, I have no patience with fantasies at once so timorous, so idle, and so awkward. They belong to the veriest *cowardice* of thought. That Nature and the God of Nature are distinct, no thinking being can long doubt. By the former we imply merely the laws of the latter. But with the very idea of God, omnipotent, omniscient, we entertain, also, the idea of *the infallibility* of his laws. With Him there being neither Past nor Future—with Him all being *Now*—do we not insult him in supposing his laws so contrived as not to provide for every possible contingency?—or, rather, what idea *can* we have of *any* possible contingency, except that it is at once a result and a manifestation of his laws? He who, divesting himself of prejudice, shall have the rare courage to think absolutely for himself, cannot fail to arrive, in the end, at the condensation of *laws* into *Law*—cannot fail of reaching the conclusion that *each law of Nature is dependent at all points upon all other laws,* and that all are but consequences of one primary exercise of the Divine Volition. Such is the principle of the Cosmogony which, with all necessary deference, I here venture to suggest and to maintain.

In this view, it will be seen that, dismissing as frivolous, and even impious, the fancy of the tangential force having been imparted to the planets immediately by "the finger of God," I consider this force as originating in the rotation of the stars:—this rotation as brought about by the in-rushing of the primary atoms, towards their respective centres of aggregation:—this in-rushing as the consequence of the law of Gravity:—this law as but the mode in which is necessarily manifested the tendency of the atoms to return into imparticularity:—this tendency to return as but the inevitable reaction of the first and most sublime of Acts—that act by which a God, self-existing and alone existing, became all things at once, through dint of his volition, while all things were thus constituted a portion of God.

The radical assumptions of this Discourse suggest to me, and in fact imply, certain important *modifications* of the Nebular Theory as given by Laplace. The efforts of the repulsive power I have considered as made for the purpose of preventing contact among the atoms, and thus as made in the ratio of the approach to contact—that is to say, in the ratio of condensation.* In other words, *Electricity*, with its involute phænomena, heat, light and magnetism, is to be understood as proceeding as condensation proceeds, and, of course, inversely, as destiny proceeds, or the *cessation to condense*. Thus the Sun, in the process of its aggregation, must soon, in developing repulsion, have become excessively heated—perhaps incandescent: and we can perceive how the operation of discarding its rings must have been materially assisted by the slight incrustation of its surface consequent on cooling. Any common experiment shows us how readily a crust of the character suggested, is separated, through heterogeneity. from the interior mass.

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But, on every successive rejection of the crust, the new surface would appear incandescent as before; and the period at which it would again become so far incrusted as to be readily loosened and discharged, may well be imagined as exactly coincident with that as which a new effort would be needed, by the whole mass, to restore the equilibrium of its two forces, disarranged through condensation. In other words:—by the time the electric influence (Repulsion) has prepared the surface for rejection, we are to understand that the gravitating influence (Attraction) is precisely ready to reject it. Here, then, as everywhere, *the Body and the Soul walk hand in hand.*

These ideas are empirically confirmed at all points. Since condensation can never, in any body, be considered as absolutely at an end, we are warranted in anticipating that, whenever we have an opportunity of testing the matter, we shall find indications of resident luminosity in *all* the stellar bodies—moons and planets as well as suns. That our Moon is strongly self-luminous, we see at every total eclipse, when, if not so, she would disappear. On the dark part of the satellite, too, during her phases, we often observe flashes like our own Auroras; and that these latter, with our various other so-called electrical phænomena, without reference to any more steady radiance, must give our Earth a certain appearance of luminosity to an inhabitant of the Moon, is quite evident. In fact, we should regard all the phænomena referred to, as mere manifestations, in different moods and degrees, of the Earth's feebly-continued condensation.

If my views are tenable, we should be prepared to find the newer planets—that is to say, those nearer the Sun—more luminous than those older and more remote:—and the extreme brilliancy of Venus (on whose dark portions, during her phases, the Auroras are frequently visible) does not seem to be altogether accounted for by her mere proximity to the central orb. She is no doubt vividly self-luminous, although less so than Mercury: while the luminosity of Neptune may be comparatively nothing.

Admitting what I have urged, it is clear that, from the moment of the Sun's discarding a ring, there must be a continuous diminution both of his heat and light, on account of the continuous incrustation of his surface; and that a period would arrive—the period immediately previous to a new discharge—when a *very material* decrease of both light and heat, must become apparent. Now, we know that tokens of such changes are distinctly recognisable. On the Melville islands—to adduce merely one out of a hundred examples—we find traces of *ultra-tropical* vegetation—of plants that never could have flourished without immensely more light and heat than are at present afforded by our Sun to any portion of the surface of the Earth. Is such vegetation referable to an epoch immediately subsequent to the whirling-off of Venus? At this epoch must have occurred to us our greatest access of solar influence; and, in fact, this influence must then have attained its maximum:—leaving out of view, of course, the period when the Earth itself was discarded—the period of its mere organization.

Again:—we know that there exist *non-luminous suns*—that is to say, suns whose existence we determine through the movements of others, but whose luminosity is not sufficient to impress us. Are these suns invisible merely on account of the length of time elapsed since their discharge of a planet? And yet again:—may we not—at least in certain cases—account for the sudden appearances of suns where none had been previously suspected, by the hypothesis that, having rolled with incrusted surfaces throughout the few thousand years of our astronomical history, each of these suns, in whirling off a new secondary, has at length been enabled to display the glories of its still incandescent interior?—To the well-ascertained fact of the proportional increase of heat as we descend into the Earth, I need of course, do nothing more than refer:—it comes in the strongest possible corroboration of all that I have said on the topic now at issue.

In speaking, not long ago, of the repulsive or electrical influence, I remarked that "the important phænomena of vitality, consciousness, and thought, whether we observe them generally or in detail, seem to proceed *at least in the ratio of the heterogeneous.*"* I mentioned, too, that I would recur to the suggestion:—and this is the proper point at which to do so. Looking at the matter, first, in detail, we perceive that not merely the *manifestation* of vitality, but its importance, consequences, and elevation of character, keep pace, very closely, with the heterogeneity, or complexity, of the animal structure. Looking at the question, now, in its generality, and referring to the first movements of the atoms towards mass-constitution, we find that heterogeneousness, brought about directly through condensation, is proportional with it forever. We thus reach the proposition that *the importance of the development of the terrestrial vitality proceeds equably with the terrestrial condensation.*

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* Page 38.

Now this is in precise accordance with what we know of the succession of animals on the Earth. As it has proceeded in its condensation, superior and still superior races have appeared. Is it impossible that the successive geological revolutions which have attended, at least, if not immediately caused, these successive elevations of vitalic character—is it improbable that these revolutions have themselves been produced by the successive planetary discharges from the Sun—in other words, by the successive variations in the solar influence on the Earth? Were this idea tenable, we should not be unwarranted in the fancy that the discharge of yet a new planet, interior to Mercury, may give rise to yet a new modification of the terrestrial surface—a modification from which may spring a race both materially and spiritually superior to Man. These thoughts impress me with all the force of truth—

but I throw them out, of course, merely in their obvious character of suggestion.

The Nebular Theory of Laplace has lately received far more confirmation than it needed, at the hands of the philosopher, Comte. These two have thus together shown—*not*, to be sure, that Matter at any period actually existed as described, in a state of nebular diffusion, but that, admitting it so to have existed throughout the space and much beyond the space now occupied by our solar system, *and to have commenced a movement towards a centre*—it must gradually have assumed the various forms and motions which are now seen, in that system, to obtain. A demonstration such as this—a dynamical and mathematical demonstration, as far as demonstration can be—unquestionable and unquestioned—unless, indeed, by that unprofitable and disreputable tribe, the professional questioners—the mere madmen who deny the Newtonian law of Gravity on which the results of the French mathematicians are based—a demonstration, I say, such as this, would to most intellects be conclusive—and I confess that it is so to mine—of the validity of the nebular hypothesis upon which the demonstration depends.

That the demonstration does not *prove* the hypothesis, according to the common understanding of the word "proof," I admit, of course. To show that certain existing results—that certain established facts—may be, even mathematically, accounted for by the assumption of a certain hypothesis, is by no means to establish the hypothesis itself. In other words:—to show that, certain data being given, a certain existing result might, or even *must*, have ensued, will fail to prove that this result *did* ensue, *from the data*, until such time as it shall be also shown that there are, *and can be*, no other data from which the result in question might *equally* have ensued. But, in the case now discussed, although all must admit the deficiency of what we are in the habit of terming "proof," still there are many intellects, and those of the loftiest order, to which *no* proof could bring one iota of additional *conviction*. Without going into details which might impinge upon the Cloud-Land of Metaphysics, I may as well here observe, that the force of conviction, in cases such as this, will always, with the right-thinking, be proportional to the amount of *complexity* intervening between the hypothesis and the result. To be less abstract:—The greatness of the complexity found existing among cosmical conditions, by rendering great in the same proportion the difficulty of accounting for all these conditions, *at once*, strengthens, also in the same proportion, our faith in that hypothesis which does, in such manner, satisfactorily account for them:—and as *no* complexity can well be conceived greater than that of the astronomical conditions, so no conviction can be stronger—to *my* mind at least—than that with which I am impressed by an hypothesis that not only reconciles these conditions, with mathematical accuracy, and reduces them into a consistent and intelligible whole, but is, at the same time, the *sole* hypothesis by means of which the human intellect has been ever enabled to account for them *at all*.

A most unfounded opinion has been latterly current in gossiping and even in scientific circles—the opinion that the so-called Nebular Cosmogony has been overthrown. This fancy has arisen from the report of late observations made, among what hitherto have been termed the "nebulæ," through the large telescope of Cincinnati, and the world-renowned instrument of Lord Rosse. Certain spots in the firmament which presented, even to the most powerful of the old telescopes, the appearance of nebulosity, or haze, had been regarded for a long time as confirming the theory of Laplace. They were looked upon as stars in that very process of condensation which I have been attempting to describe. Thus it was supposed that we "had ocular evidence"—an evidence, by the way, which has always been found very questionable—of the truth of the hypothesis; and, although certain telescopic improvements, every now and then, enabled us to perceive that a spot, here and there, which we had been classing among the nebulæ, was, in fact, but a cluster of stars deriving its nebular character only from its immensity of distance—still it was thought that no doubt could exist as to the actual nebulosity of numerous other masses, the strong-holds of the nebulists, bidding defiance to every effort at segregation. Of these latter the most interesting was the great "nebula" in the constellation Orion:—but this, with innumerable other miscalled "nebulæ," when viewed through the magnificent modern telescopes, has become resolved into a simple collection of stars. Now this fact has been very generally understood as conclusive against the Nebular Hypothesis of Laplace; and, on announcement of the discoveries in question, the most enthusiastic defender and most eloquent popularizer of the theory, Dr. Nichol, went so far as to "admit the necessity of abandoning" an idea which had formed the material of his most praiseworthy book.[*]

Many of my readers will no doubt be inclined to say that the result of these new investigations *has* at least a strong *tendency* to overthrow the hypothesis; while some of them, more thoughtful, will suggest that, although the theory is by no means disproved through the segregation of the particular "nebulæ" alluded to, still a *failure* to segregate them, with such telescopes, might well have been understood as a triumphant *corroboration* of the theory: and this latter class will be surprised, perhaps, to hear me say that even with *them* I disagree. If the propositions of this Discourse have been comprehended, it will be seen that, in my view, a failure to segregate the "nebulæ" would have tended to the refutation, rather than to the confirmation, of the Nebular Hypothesis.

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[*] "*Views of the Architecture of the Heavens.*" A letter, purporting to be from Dr. Nichol to a friend in America, went the rounds of our newspapers, about two years ago, I think, admitting "the necessity" to which I refer. In a subsequent Lecture, however, Dr. N. appears in some manner to have gotten the better of the necessity, and does not quite *renounce* the theory, although he seems to wish that he could sneer at it as "a purely hypothetical one." What else was the Law of Gravity before the Maskelyne experiments? and who questioned the Law of Gravity, even then?

Let me explain:—The Newtonian Law of Gravity we may, of course, assume as demonstrated. This law, it will be remembered, I have referred to the reaction of the first Divine Act—to the reaction of an exercise of the Divine Volition temporarily overcoming a difficulty. This difficulty is that of forcing the normal into the abnormal—of impelling that whose originality, and therefore whose rightful condition was *One,* to take upon itself the wrongful condition of *Many.* It is only by conceiving this difficulty as *temporarily* overcome, that we can comprehend a reaction. There could have been no reaction had the act been infinitely continued. So long as the act *lasted,* no reaction, of course, could commence; in other words, no *gravitation* could take place—for we have considered the one as but the manifestation of the other. But gravitation *has* taken place; therefore the act of Creation has ceased; and gravitation has long ago taken place; therefore the act of Creation has long ago ceased. We can no more expect, then, to observe *the primary processes* of Creation; and to these primary processes the condition of nebulosity has already been explained to belong.

Through what we know of the propagation of light, we have direct proof that the more remote of the stars have existed, under the forms in which we now see them, for an inconceivable number of years. So far back *at least,* then, as the period when these stars underwent condensation, must have been the epoch at which the mass-constitutive processes began. That we may conceive these processes, then, as still going on in the case of certain "nebulæ," while in all other cases we find them thoroughly at an end, we are forced into assumptions for which we have really *no* basis whatever—we have to thrust in, again, upon the revolting Reason, the blasphemous idea, of special interposition—we have to suppose that, in the particular instances of these "nebulæ," an unerring God found it necessary to introduce certain supplementary regulations—certain improvements of the general law—certain re-touchings and emendations, in a word, which had the effect of deferring the completion of these individual stars for centuries of centuries beyond the æra during which all the other stellar bodies had time, not only to be fully constituted, but to grow hoary with an unspeakable old age.

Of course, it will be immediately objected that, since the light by which we recognise the nebulæ now must be merely that which left their surfaces a vast number of years ago, the processes at present observed, or supposed to be observed, are, in fact, *not* processes now actually going on, but the phantoms of processes completed long in the Past—just as I maintain all these mass-constitutive processes *must* have been.

To this I reply that neither is the now-observed condition of the condensed stars their actual condition, but a condition completed long in the Past; so that my argument drawn from the *relative* condition of the stars and the "nebulæ," is in no manner disturbed. Moreover, those who maintain the existence of nebulæ, do *not* refer the nebulosity to extreme distance; they declare it a real and not merely a perspective nebulosity. That we may conceive, indeed, a nebular mass as visible at all, we must conceive it as *very near us* in comparison with the condensed stars brought into view by the modern telescopes. In maintaining the appearances in question, then, to be really nebulous, we maintain their comparative vicinity to our point of view. Thus, their condition, as we see them now, must be referred to an epoch *far less remote* than that to which we may refer the now-observed condition of at least the majority of the stars.—In a word, should Astronomy ever demonstrate a "nebula," in the sense at present intended, I should consider the Nebular Cosmogony—*not*, indeed, as corroborated by the demonstration—but as thereby irretrievably overthrown.

By way, however, of rendering unto Cæsar *no more* than the things that are Cæsar's, let me here remark that the assumption of the hypothesis which led him to so glorious a result, seems to have been suggested to Laplace in great measure by a misconception—by the very misconception of which we have just been speaking—by the generally prevalent misunderstanding of the character of the nebulæ, so mis-named. These he supposed to be, in reality, what their designation implies. The fact is, this great man had, very properly, an inferior faith in his own merely *perceptive* powers. In respect, therefore, to the actual existence of nebulæ—an existence so confidently maintained by his telescopic contemporaries—he depended less upon what he saw than upon what he heard.

It will be seen that the only valid objections to his theory, are those made to its hypothesis as such—to what suggested it—not to what it suggests; to its propositions rather than to its results. His most unwarranted assumption was that of giving the atoms a movement towards a centre, in the very face of his evident understanding that these atoms, in unlimited succession, extended throughout the Universal space. I have already shown that, under such circumstances, there could have occurred no movement at all; and Laplace, consequently, assumed one on no more philosophical ground that that something of the kind was necessary for the establishment of what he intended to establish.

His original idea seems to have been a compound of the true Epicurean atoms with the false nebulæ of his contemporaries; and thus his theory presents us with the singular anomaly of absolute truth deduced, as a mathematical result, from a hybrid datum of ancient imagination intertangled with modern inacumen. Laplace's real strength lay, in fact, in an almost miraculous mathematical instinct:—on this he relied; and in no instance did it fail or deceive him: —in the case of the Nebular Cosmogony, it led him, blindfolded, through a labyrinth of Error, into one of the most luminous and stupendous temples of Truth.

Let us now fancy, for the moment, that the ring first thrown off by the Sun—that is to say, the ring whose breaking-up constituted Neptune—did not, in fact, break up until the throwing-off of the ring out of which Uranus arose; that this latter ring, again, remained perfect until the discharge of that out of which sprang Saturn; that this latter, again, remained entire until the discharge of that from which originated Jupiter—and so on. Let us imagine, in a word, that no dissolution occurred among the rings until the final rejection of that which gave birth to Mercury. We thus paint to the eye of the mind a series of coexistent concentric circles; and looking as well at *them* as at the processes by which, according to Laplace's hypothesis, they were constructed, we perceive at once a very singular analogy with the atomic strata and the process of the original irradiation as I have described it. It is impossible that, on measuring the *forces*, respectively, by which each successive planetary circle was thrown off—that is to say, on measuring the successive excesses of rotation over gravitation which occasioned the successive discharges—we should find the analogy in question more decidedly confirmed? *Is it improbable that we should discover these forces to have varied—as in the original radiation—proportionally to the squares of the distances?*

Our solar system, consisting, in chief, of one sun, with sixteen planets certainly, and possibly a few more, revolving about it at various distances, and attended by seventeen moons assuredly, but *very* probably by several others—is now to be considered as *an example* of the innumerable agglomerations which proceeded to take place throughout the Universal Sphere of atoms on withdrawal of the Divine Volition. I mean to say that our solar system is to be understood as affording a *generic instance* of these agglomerations, or, more correctly, of the ulterior conditions at which they arrived. If we keep our attention fixed on the idea of *the utmost possible Relation* as the Omnipotent design, and on the precautions taken to accomplish it through difference of form, among the original atoms, and particular inequidistance, we shall find it impossible to suppose for a moment that even any two of the incipient agglomerations reached precisely the same result in the end. We shall rather be inclined to think that *no two* stellar bodies in the Universe—whether suns, planets or moons—are particularly, while *all* are generally, similar. Still less, then, can we imagine any two *assemblages* of such bodies—any two "systems"—as having more than a general resemblance.[*] Our telescopes, at this point, thoroughly confirm our deductions. Taking our own solar system, then, as merely a loose or general type of all, we have so far proceeded in our subject as to survey the Universe under the aspect of a spherical space, throughout which, dispersed with merely general equability, exist a number of but generally similar *systems*.

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[*] It is not *impossible* that some unlooked-for optical improvement may disclose to us, among innumerable varieties of systems, a luminous sun, encircled by luminous and non-luminous rings, within and without a[illegible] between which, revolve luminous and non-luminous plan[illegible]ttended by moons having moons—and even these latter [illegible] having moons.

Let us now, expanding our conceptions, look upon each of these systems as in itself an atom; which in fact it is, when we consider it as but one of the countless myriads of systems which constitute the Universe. Regarding all, then, as but colossal atoms, each with the same ineradicable tendency to Unity which characterizes the actual atoms of which it consists—we enter at once upon a new order of aggregations. The smaller systems, in the vicinity of a larger one, would, inevitably, be drawn into still closer vicinity. A thousand would assemble here; a million there—perhaps here, again, even a billion—leaving, thus, immeasurable vacancies in space. And if, now, it be demanded why, in the case of these systems—of these merely Titanic atoms—I speak, simply, of an "assemblage," and not, as in the case of the actual atoms, of a more or less consolidated agglomeration:—if it be asked, for instance, why I do not carry what I suggest to its legitimate conclusion, and describe, at once, these assemblages of system-atoms as rushing to consolidation in spheres—as each becoming condensed into one magnificent sun—my reply is that *μέλλοντα ταῦτα*[*]—I am but pausing, for a moment, on the awful threshold of *the Future.* For the present, calling these assemblages "clusters," we see them in the incipient stages of their consolidation. Their *absolute* consolidation is *to come.*

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[*] A quotation from the "Antigone" of Sophocles, meaning "These things are of the future."—EDITOR.

We have now reached a point from which we behold the Universe as a spherical space, interspersed, *unequably,* with *clusters.* It will be noticed that I here prefer the adverb "unequably" to the phrase "with a merely general equability," employed before. It is evident, in fact, that the equability of distribution will diminish in the ratio of the agglomerative processes—that is to say, as the things distributed diminish in number. Thus the increase of *in*equability—an increase which must continue until, sooner or later, an epoch will arrive at which the largest agglomeration will absorb all the others—should be viewed as, simply, a corroborative indication of the *tendency to One.*

And here, at length, it seems proper to inquire whether the ascertained *facts* of Astronomy confirm the general arrangement which I have thus, deductively, assigned to the Heavens. Thoroughly, they *do.* Telescopic observation, guided by the laws of perspective, enables us to understand that the perceptible Universe exists as *a cluster of clusters, irregularly disposed.*

The "clusters" of which this Universal "*cluster of clusters*" consists, are merely what we have been in the practice of designating "nebulæ"—and, of these "nebulæ," *one* is of paramount interest to mankind. I allude to the

Galaxy, or Milky Way. This interests us, first and most obviously, on account of its great superiority in apparent size, not only to any one other cluster in the firmament, but to all the other clusters taken together. The largest of these latter occupies a mere point, comparatively, and is distinctly seen only with the aid of a telescope. The Galaxy sweeps throughout the Heaven and is brilliantly visible to the naked eye. But it interests man chiefly, although less immediately, on account of its being his home; the home of the Earth on which he exists; the home of the Sun about which this Earth revolves; the home of that "system" of orbs of which the Sun is the centre and primary—the Earth one of sixteen secondaries, or planets—the Moon one of seventeen tertiaries, or satellites. The Galaxy, let me repeat, is but one of the *clusters* which I have been describing—but one of the mis-called "nebulæ" revealed to us—by the telescope alone, sometimes—as faint hazy spots in various quarters of the sky. We have no reason to suppose the Milky Way *really* more extensive than the least of these "nebulæ." Its vast superiority in size is but an apparent superiority arising from our position in regard to it—that is to say, from our position in its midst. However strange the assertion may at first appear to those unversed in Astronomy, still the astronomer himself has no hesitation in asserting that we are *in the midst* of that inconceivable host of stars—of suns—of systems— which constitute the Galaxy. Moreover, not only have *we*—not only has *our*

Sun a right to claim the Galaxy as its own especial cluster, but, with slight reservation, it may be said that all the distinctly visible stars of the firmament—all the stars visible to the naked eye—have equally a right to claim it as *their* own.

There has been a great deal of misconception in respect to the *shape* of the Galaxy; which, in nearly all our astronomical treatises, is said to resemble that of a capital Y. The cluster in question has, in reality, a certain general—*very* general resemblance to the planet Saturn, with its encompassing triple ring. Instead of the solid orb of that planet however, we must picture to ourselves a lenticular star-island, or collection of stars; our Sun lying excentrically—near the shore of the island—on that side of it which is nearest the constellation of the Cross and farthest from that of Cassiopeia. The surrounding ring, where it approaches our position, has in it a longitudinal *gash,* which does, in fact, cause *the ring, in our vicinity,* to assume, loosely, the appearance of a capital Y.

We must not fall into the error, however, of conceiving the somewhat indefinite girdle as at all *remote,* comparatively speaking, from the also indefinite lenticular cluster which it surrounds; and thus, for mere purpose of explanation, we may speak of our Sun as actually situated at that point of the Y where its three component lines unite; and, conceiving this letter to be of a certain solidity—of a certain thickness, very trivial in comparison with its length—we may even speak of our position as *in the middle* of this thickness. Fancying ourselves thus placed, we shall no longer find difficulty in accounting for the phænomena presented—which are perspective altogether. When we look upward or downward—that is to say, when we cast our eyes in the direction of the letter's *thickness*—we look through fewer stars than when we cast them in the direction of its *length*, or *along* either of the three component lines. Of course, in the former case, the stars appear scattered—in the latter, crowded.—To reverse this explanation:—An inhabitant of the Earth, when looking, as we commonly express ourselves, *at* the Galaxy, is then beholding it in some of the directions of its length—is looking *along* the lines of the Y—but when, looking out into the general Heaven, he turns his eyes *from* the Galaxy, he is then surveying it in the direction of the letter's thickness; and on this account the stars seem to him scattered; while, in fact, they are as close together, on an average, as in the mass of the cluster. *No* consideration could be better adapted to convey an idea of this cluster's stupendous extent.

If, with a telescope of high space-penetrating power, we carefully inspect the firmament, we shall become aware of *a belt of clusters*—of what we have hitherto called "nebulæ"—a *band*, of varying breadth, stretching from horizon to horizon, at right angles to the general course of the Milky Way. This band is the ultimate *cluster of clusters*. This belt is *The Universe*. Our Galaxy is but one, and perhaps one of the most inconsiderable, of the clusters which go to the constitution of this ultimate, Universal *belt* or *band*. The appearance of this cluster of clusters, to our eyes, *as* a belt or band, is altogether a perspective phænomenon of the same character as that which causes us to behold our own individual and roughly-spherical cluster, the Galaxy, under guise also of a belt, traversing the Heavens at right angles to the Universal one. The shape of the all-inclusive cluster is, of course *generally*, that of each individual cluster which it includes. Just as the scattered stars which, on looking *from* the Galaxy, we see in the general sky, are, in fact, but a portion of that Galaxy itself, and as closely intermingled with it as any of the telescopic points in what seems the densest portion of its mass—so are the scattered "nebulæ" which, on casting our [illegible] *from* the Universal *belt*, we perceive at all points of the firmament—so, I say, are these scattered "nebulæ" to be understood [illegible] only perspectively scattered, and as part and parcel of the one supreme and Universal *sphere*.

No astronomical fallacy is more untenable, and none has been more pertinaciously adhered to, than that of the absolute *illimitation* of the Universe of Stars. The reasons for limitation, as I have already assigned them, *a priori*, seem to me unanswerable; but, not to speak of these, *observation* assures us that there is, in numerous directions around us, certainly, if not in all, a positive limit—or, at the very least, affords us no basis whatever for thinking otherwise. Were the succession of stars endless, then the background of the sky would present us a uniform luminosity, like that displayed by the Galaxy—*since there could be absolutely no point, in all that background, at which would not exist a star.* The only mode, therefore, in which, under such a state of affairs, we could comprehend the *voids* which our telescopes find in innumerable directions, would be by supposing the distance of the invisible background so immense that no ray from it has yet been able to reach us at all. That this *may* be so, who shall venture to deny? I maintain, simply, that we have not even the shadow of a reason for believing that it *is* so.

When speaking of the vulgar propensity to regard all bodies on the Earth as tending merely to the Earth's centre, I observed that, "with certain exceptions to be specified hereafter, every body on the Earth tended not only to the Earth's centre, but in every conceivable direction besides."* The "exceptions" refer to those frequent gaps in the Heavens, where our utmost scrutiny can detect not only no stellar bodies, but no indications of their existence:—where yawning chasms, blacker than Erebus, seem to afford us glimpses, through the boundary walls of the Universe of Stars, into the illimitable Universe of Vacancy, beyond. Now as any body, existing on the Earth, chances to pass, either through its own movement or the Earth's, into a line with any one of these voids, or cosmical abysses, it clearly is no longer attracted *in the direction of that void,* and for the moment, consequently, is "heavier" than at any period, either after or before. Independently of the consideration of these voids, however, and looking only at the generally unequable distribution of the stars, we see that the absolute tendency of bodies on the Earth to the Earth's centre, is in a state of perpetual variation.

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* Page 42.

We comprehend, then, the insulation of our Universe. We perceive the isolation of *that*—of *all* that which we grasp with the senses. We know that there exists one *cluster of clusters*—a collection around which, on all sides, extend the immeasurable wildernesses of a Space *to all human perception* untenanted. But *because* upon the confines of this Universe of Stars we are compelled to pause, through want of farther evidence from the senses, is it right to conclude that, in fact, there *is* no material point beyond that which we have thus been permitted to attain? Have we, or have we not, an analogical right to the inference that this perceptible Universe—that this cluster of clusters—is but one of *a series* of clusters of clusters, the rest of which are invisible through distance—through the diffusion of their light being so excessive, ere it reaches us, as not to produce upon our retinas a light impression—or from there being no such emanation as light at all, in these unspeakably distant worlds—or, lastly, from the mere interval being so vast, that the electric tidings of their presence in Space, have not yet—through the lapsing myriads of years—been enabled to traverse that interval?

Have we any right to inferences—have we any ground whatever for visions such as these? If we have a right to them in *any* degree, we have a right to their infinite extension.

The human brain has obviously a leaning to the "*Infinite,*" and fondles the phantom of the idea. It seems to long with a passionate fervor for this impossible conception, with the hope of intellectually believing it when conceived. What is general among the whole race of Man, of course no individual of that race can be warranted in considering abnormal; nevertheless, there *may* be a class of superior intelligences, to whom the human bias alluded to may wear all the character of monomania.

My question, however, remains unanswered:—Have we any right to infer—let us say, rather, to imagine—an interminable succession of the "cluster of clusters," or of "Universes" more or less similar?

I reply that the "right," in a case such as this, depends absolutely upon the hardihood of that imagination which ventures to claim the right. Let me declare, only, that, as an individual, I myself feel impelled to *fancy*—without daring to call it more—that there *does* exist a *limitless* succession of Universes, more or less similar to that of which we have cognizance—to that of which *alone* we shall ever have cognizance—at the very least until the return of our own particular Universe into Unity. *If* such clusters of clusters exist, however—*and they do*—it is abundantly clear that, having had no part in our origin, they have no portion in our laws. They neither attract us, nor we them. Their material—their spirit is not ours—is not that which obtains in any part of our Universe. They could not impress our senses or our souls. Among them and us—considering all, for the moment, collectively—there are no influences in common. Each exists, apart and independently, *in the bosom of its proper and particular God.*

In the conduct of this Discourse, I am aiming less at physical than at metaphysical order. The clearness with which even material phænomena are presented to the understanding, depends very little, I have long since learned to perceive, upon a merely natural, and almost altogether upon a moral, arrangement. If then I seem to step somewhat too discursively from point to point of my topic, let me suggest that I do so in the hope of thus the better keeping unbroken that chain of *graduated impression* by which alone the intellect of Man can expect to encompass the grandeurs of which I speak, and, in their majestic totality, to comprehend them.

So far, our attention has been directed, almost exclusively, to a general and relative grouping of the stellar bodies in space. Of specification there has been little; and whatever ideas of *quantity* have been conveyed—that is to say, of number, magnitude, and distance—have been conveyed incidentally and by way of preparation for more definite conceptions. These latter let us now attempt to entertain.

Our solar system, as has been already mentioned, consists, in chief, of one sun and sixteen planets certainly, but in all probability a few others, revolving around it as a centre, and attended by seventeen moons of which we know, with possibly several more of which as yet we know nothing. These various bodies are not true spheres, but oblate spheroids—spheres flattened at the poles of the imaginary axes about which they rotate:—the flattening being a consequence of the rotation. Neither is the Sun absolutely the centre of the system; for this Sun itself with all the planets, revolves about a perpetually shifting point of space, which is the system's general centre of gravity. Neither are we to consider the paths through which these different spheroids move—the moons about the planets, the planets about the Sun, or the Sun about the common centre—as circles in an accurate sense. They are, in fact, *ellipses—one of the foci being the point about which the revolution is made.* An ellipse is a curve, returning into itself, one of whose diameters is longer than the other. In the longer diameter are two points, equidistant from the middle of the line, and so situated otherwise that if, from each of them a straight line be drawn to any one point of the curve, the two lines, taken together, will be equal to the long diameter itself. Now let us conceive such an ellipse. At one of the points mentioned, which are the *foci,* let us fasten an orange. By an elastic thread let us connect this orange with a pea; and let us place this latter on the circumference of the ellipse. Let us now move the pea continuously around the orange—keeping always on the circumference of the ellipse. The elastic thread, which, of course, varies in length as we move the pea, will form what in geometry is called a *radius vector.* Now, if the orange be understood as the Sun, and the pea as a planet revolving about it, then the revolution should be made at such a rate—with a velocity so varying—that the *radius vector* may pass over *equal areas of space in equal times.* The progress of the pea *should be*—in other words, the progress of the planet *is,* of course,—slow in proportion to its distance from the Sun—swift in proportion to its proximity. Those planets, moreover, move the more slowly which are the farther from the Sun; *the squares of their periods of revolution having the same proportion to each other, as have to each other the cubes of their mean distances from the Sun.*

The wonderfully complex laws of revolution here described, however, are not to be understood as obtaining in our system alone. They *everywhere* prevail where Attraction prevails. They control *the Universe.* Every shining speck in the firmament is, no doubt, a luminous Sun, resembling our own, at least in its general features, and having in attendance upon it a greater or less number of planets, greater or less, whose still lingering luminosity is not sufficient to render them visible to us at so vast a distance, but which, nevertheless, revolve, moon-attended, about the starry centres, in obedience to the principles just detailed—in obedience to the three omniprevalent laws of revolution—the three immortal laws *guessed* by the imaginative Kepler, and but subsequently demonstrated and accounted for by the patient and mathematical Newton. Among a tribe of philosophers who pride themselves excessively upon matter-of-fact, it is far too fashionable to sneer at all speculation under the comprehensive *sobriquet*, "guess-work." The point to be considered is, *who* guesses. In guessing with Plato, we spend our time to better purpose, now and then, than in harkening to a demonstration by Alcmæon.

In many works on Astronomy I find it distinctly stated that the laws of Kepler are *the basis* of the great principle, Gravitation. This idea must have arisen from the fact that the suggestion of these laws by Kepler, and his proving them *a posteriori* to have an actual existence, led Newton to account for them by the hypothesis of Gravitation, and, finally, to demonstrate them *a priori*, as necessary consequences of the hypothetical principle. Thus so far from the laws of Kepler being the basis of Gravity, Gravity is the basis of these laws—as it is, indeed, of all the laws, of the material Universe which are not referable to Repulsion alone.

The mean distance of the Earth from the Moon—that is to say, from the heavenly body in our closest vicinity—is 237,000 miles. Mercury, the planet nearest the Sun, is distant from him 37 millions of miles. Venus, the next, revolves at a distance of 68 millions:—the Earth, which comes next, at a distance of 95 millions: —Mars, then, at a distance of 144 millions. Now come the eight Asteroids (Ceres, Juno, Vesta, Pallas, Astræa, Flora, Iris, and Hebe) at an average distance of about 250 millions. Then we have Jupiter, distant 490 millions; then Saturn, 900 millions; then Uranus, 19 hundred millions; finally Neptune, lately discovered, and revolving at a distance, say of 28 hundred millions. Leaving Neptune out of the account—of which as yet we know little accurately and which is, possibly, one of a system of Asteroids—it will be seen that, within certain limits, there exists an *order of interval* among the planets. Speaking loosely, we may say that each outer planet is twice as far from the Sun as is the next inner one. May not the *order* here mentioned—*may not the law of Bode—be deduced from consideration of the analogy suggested by me as having place between the solar discharge of rings and the mode of the atomic irradiation?*

The numbers hurriedly mentioned in this summary of distance, it is folly to attempt comprehending, unless in the light of abstract arithmetical facts. They are not practically tangible ones. They convey no precise ideas. I have stated that Neptune, the planet farthest from the Sun, revolves about him at a distance of 28 hundred millions of miles. So far good:—I have stated a mathematical fact; and, without comprehending it in the least, we may put it to use—mathematically. But in mentioning, even, that the Moon revolves about the Earth at the comparatively trifling distance of 237,000 miles, I entertained no expectation of giving any one to understand—to know—to feel—how far from the Earth the Moon actually *is*. 237,000 *miles!* There are, perhaps, few of my readers who have not crossed the Atlantic ocean; yet how many of them have a distinct idea of even the 3,000 miles intervening between shore and shore? I doubt, indeed, whether the man lives who can force into his brain the most remote conception of the interval between one milestone and its next neighbor upon the turnpike. We are in some measure aided, however, in our consideration of distance, by combining this consideration with the kindred one of velocity. Sound passes through 1100 feet of space in a second of time. Now were it possible for an inhabitant of the Earth to see the flash of a cannon discharged in the Moon, and to hear the report, he would have to wait, after perceiving the former, more than 13 entire days and nights before getting any intimation of the latter.

However feeble be the impression, even thus conveyed, of the Moon's real distance from the Earth, it will, nevertheless, effect a good object in enabling us more clearly to see the futility of attempting to grasp such intervals as that of the 28 hundred millions of miles between our Sun and Neptune; or even that of the 95 millions between the Sun and the Earth we inhabit. A cannon-ball, flying at the greatest velocity with which such a ball has ever been known to fly, could not traverse the latter interval in less than 20 years; while for the former it would require 590.

Our Moon's real diameter is 2160 miles; yet she is comparatively so trifling an object that it would take nearly 50 such orbs to compose one as great as the Earth.

The diameter of our own globe is 7912 miles —but from the enunciation of these numbers what positive idea do we derive?

If we ascend an ordinary mountain and look around us from its summit, we behold a landscape stretching, say 40 miles, in every direction; forming a circle 250 miles in circumference; and including an area of 5000 square miles. The extent of such a prospect, on account of the *successiveness* with which its portions necessarily present themselves to view, can be only very feebly and very partially appreciated:—yet the entire panorama would comprehend no more than one 40,000th part of the mere *surface* of our globe. Were this panorama, then, to be succeeded, after the lapse of an hour, by another of equal extent; this again by a third, after the lapse of an hour; this again by a fourth after lapse of another hour—and so on, until the scenery of the whole Earth were exhausted; and were we to be engaged in examining these various panoramas for twelve hours of every day; we should nevertheless, be 9 nine years and 48 days in completing the general survey.

But if the mere surface of the Earth eludes the grasp of the imagination, what are we to think of its cubical contents? It embraces a mass of matter equal in weight to at least two sextillions, two hundred quintillions of tons. Let us suppose it in a state of quiescence; and now let us endeavor to conceive a mechanical force sufficient to set it in motion! Not the strength of all the myriads of beings whom we may conclude to inhabit the planetary worlds of our systems—not the combined physical strength of *all* these beings—even admitting all to be more powerful than man—would avail to stir the ponderous mass *a single inch* from its position.

What are we to understand, then, of the force, which under similar circumstances, would be required to move the *largest* of our planets, Jupiter? This is 86,000 miles in diameter, and would include within its periphery more than a thousand orbs of the magnitude of our own. Yet this stupendous body is actually flying around the Sun at the rate of 29,000 miles an hour—that is to say, with a velocity forty times greater than that of a cannot-ball! The thought of such a phænomenon cannot well be said to *startle* the mind:—it palsies and appals it. Not unfrequently we task our imagination in picturing the capacities of an angel. Let us fancy such a being at a distance of some hundred miles from Jupiter—a close eye-witness of this planet as it speeds on its annual revolution. Now *can* we, I demand, fashion for ourselves any conception so distinct of this ideal being's spiritual exaltation, as *that* involved in the supposition that, even by this immeasurable mass of matter, whirled immediately before his eyes, with a velocity so unutterable, he—an angel—angelic though he be—

is not at once struck into nothingness and overwhelmed?

At this point, however, it seems proper to suggest that, in fact, we have been speaking of comparative trifles. Our Sun—the central and controlling orb of the system to which Jupiter belongs—is not only greater than Jupiter, but greater by far than all the planets of the system taken together. This fact is an essential condition, indeed, of the stability of the system itself. The diameter of Jupiter has been mentioned: it is 86,000 miles:—that of the Sun is 882,000 miles. An inhabitant of the latter, travelling ninety miles a day, would be more than eighty years in going round a great circle of its circumference. It occupies a cubical space of 681 quadrillions, 472 trillions of miles. The Moon, as has been stated, revolves about the Earth at a distance of 237,000 miles—in an orbit, consequently, of nearly a million and a half. Now, were the Sun placed upon the Earth, centre over centre, the body of the former would extend, in every direction, not only to the line of the Moon's orbit, but beyond it, a distance of 200,000 miles.

And here, once again, let me suggest that, in fact, we have *still* been speaking of comparative trifles. The distance of the planet Neptune from the Sun has been stated: it is 28 hundred millions of miles: the circumference of its orbit, therefore, is about 17 billions. Let this be borne in mind while we glance at some one of the brightest stars. Between this and the star of *our* system, (the Sun,) there is a gulf of space, to convey any idea of which, we should need the tongue of an archangel. From *our* system, then, and from *our* Sun, or star, the star at which we suppose ourselves glancing is a thing altogether apart:—still, for the moment, let us imagine it placed upon our Sun, centre over centre, as we just now imagined this Sun itself placed upon the Earth. Let us now conceive the particular star we have in mind, extending, in every direction, beyond the orbit of Mercury—of Venus—of the Earth:—still *on,* beyond the orbit of Mars—of Jupiter—of Uranus—until, finally, we fancy it filling the circle—*seventeen billions of miles in circumference*—which is described by the revolution of Leverrier's planet. When we have conceived all this, we shall have entertained no extravagant conception. There is the very best reason for believing that many of the stars are even far larger than the one we have imagined. I mean to say, that we have the very best *empirical* basis for such belief:—and, in looking back at the original, atomic arrangements for *diversity,* which have been assumed as a part of the Divine plan in the constitution of the Universe, we shall be enabled easily to understand, and to credit, the existence of even far vaster disproportions in stellar size than any to which I have hitherto alluded. The largest orbs, of course, we must expect to find rolling through the widest vacancies of Space.

I remarked, just now, that to convey an idea of the interval between our Sun and any one of the other stars, we should require the eloquence of an archangel. In so saying, I should not be accused of exaggeration; for, in simple truth, these are topics on which it is scarcely possible to exaggerate. But let us bring the matter more distinctly before the eye of the mind.

In the first place, we may get a general, *relative* conception of the interval referred to, by comparing it with the inter-planetary spaces. If, for example, we suppose the Earth, which is, in reality, 95 millions of miles from the Sun, to be only *one foot* from that luminary; then Neptune would be forty feet distant; *and the star Alpha Lyræ, at the very least, one hundred and fifty-nine.*

Now I presume that, in the termination of my last sentence, few of my readers have noticed anything especially objectionable—particularly wrong. I said that the distance of the Earth from the Sun being taken at *one foot,* the distance of Neptune would be forty feet, and that of Alpha Lyræ, one hundred and fifty-nine. The proportion between one foot and one hundred and fifty-nine, has appeared, perhaps, to convey a sufficiently definite impression of the proportion between the two intervals—that of the Earth from the Sun, and that of Alpha Lyræ from the same luminary. But my account of the matter should, in reality, have run thus:—The distance of the Earth from the Sun being taken at one foot, the distance of Neptune would be forty feet, and that of Alpha Lyræ, one hundred and fifty-nine——*miles:*—that is to say, I had assigned to Alpha Lyræ, in my first statement of the case, only the 5280*th part* of that distance which is the *least distance possible* at which it can actually lie.

To proceed:—However distant a mere *planet* is, yet when we look at it through a telescope, we see it under a certain form—of a certain appreciable size. Now I have already hinted at the probable bulk of many of the stars; nevertheless, when we view any one of them, even through the most powerful telescope, it is found to present us with *no form*, and consequently with *no magnitude* whatever. We see it as a point, and nothing more.

Again:—Let us suppose ourselves walking, at night, on a highway. In a field on one side of the road, is a line of tall objects, say trees, the figures of which are distinctly defined against the background of the sky. This line of objects extends at right angles to the road, and from the road to the horizon. Now, as we proceed along the road, we see these objects changing their positions, respectively, in relation to a certain fixed point in that portion of the firmament which forms the background of the view. Let us suppose this fixed point—sufficiently fixed for our purpose—to be the rising moon. We become aware, at once, that while the tree nearest us so far alters its position in respect to the moon, as to seem flying behind us, the tree in the extreme distance has scarcely changed at all its relative position with the satellite. We then go on to perceive that the farther the objects are from us, the less they alter their positions; and the converse. Then we begin, unwittingly, to estimate the distances of individual trees by the degrees in which they evince the relative alteration. Finally, we come to understand how it might be possible to ascertain the actual distance of any given tree in the line, by using the amount of relative alteration as a basis in a simple geometrical problem. Now, this relative alteration is what we call "parallax;" and by parallax we calculate the distances of the heavenly bodies. Applying the principle to the trees in question, we should, of course, be very much at a loss to comprehend the distance of *that* tree, which, however far we proceeded along the road, should evince *no* parallax at all. This, in the case described, is a thing impossible; but impossible only because all distances on our Earth are trivial indeed:—in comparison with the vast cosmical quantities, we may speak of them as absolutely nothing.

Now, let us suppose the star Alpha Lyræ directly overhead; and let us imagine that, instead of standing on the Earth, we stand at one end of a straight road stretching through Space to a distance equalling the diameter of the Earth's orbit—that is to say, to a distance of *one hundred and ninety millions of miles.* Having observed, by means of the most delicate micrometrical instruments, the exact position of the star, let us now pass along this inconceivable road, until we reach the other extremity. Now, once again, let us look at the star. It is *precisely* where we left it. Our instruments, however delicate, assure us that its relative position is absolutely—is identically the same, as at the commencement of our unutterable journey. *No* parallax—none whatever—has been found.

The fact is, that, in regard to the distance of the fixed stars—of any one of the myriads of suns glistening on the farther side of that awful chasm which separates our system from its brothers in the cluster to which it belongs—astronomical science, until very lately, could speak only with a negative certainty. Assuming the brightest as the nearest, we could say, even of *them*, only that there is a certain incomprehensible distance on the *hither* side of which they cannot be:—how far they are beyond it we had in no case been able to ascertain. We perceived, for example, that Alpha Lyræ cannot be nearer to us than 19 trillions, 200 billions of miles; but, for all we knew, and indeed for all we now know, it may be distant from us the square, or the cube, or any other power of the number mentioned. By dint, however, of wonderfully minute and cautious observations, continued, with novel instruments, for many laborious years, *Bessel*, not long ago deceased, has lately succeeded in determining the distance of six or seven stars; among others, that of the star numbered 61 in the constellation of the Swan. The distance in this latter instance ascertained, is 670,000 times that of the Sun; which last it will be remembered, is 95 millions of miles. The star 61 Cygni, then, is nearly 64 trillions of miles from us—or more than three times the distance assigned, *as the least possible*, for Alpha Lyræ.

In attempting to appreciate this interval by the aid of any considerations of *velocity*, as we did in endeavoring to estimate the distance of the moon, we must leave out of sight, altogether, such nothings as the speed of a cannon ball, or of sound. Light, however, according to the latest calculations of Struve, proceeds at the rate of 167,000 miles in a second. Thought itself cannot pass through this interval more speedily—if, indeed, thought can traverse it at all. Yet, in coming from 61 Cygni to us, even at this inconceivable rate, light occupies more than *ten years;* and, consequently, were the star this moment blotted out from the Universe, still, *for ten years*, would it continue to sparkle on, undimmed in its paradoxical glory.

Keeping now in mind whatever feeble conception we may have attained of the interval between our Sun and 61 Cygni, let us remember that this interval, however unutterably vast, we are permitted to consider as but the *average* interval among the countless host of stars composing that cluster, or "nebula," to which our system, as well as that of 61 Cygni, belongs. I have, in fact, stated the case with great moderation:—we have excellent reason for believing 61 Cygni to be one of the *nearest* stars, and thus for concluding, at least for the present, that its distance from us is *less* than the average distance between star and star in the magnificent cluster of the Milky Way.

And here, once again and finally, it seems proper to suggest that even as yet we have been speaking of trifles. Ceasing to wonder at the space between star and star in our own or in any particular cluster, let us rather turn our thoughts to the intervals between cluster and cluster, in the all-comprehensive cluster of the Universe.

I have already said that light proceeds at the rate of 167,000 miles in a second—that is, about 10 millions of miles in a minute, or about 600 millions of miles in an hour:—yet so far removed from us are some of the "nebulæ" that even light, speeding with this velocity, could not and does not reach us, from those mysterious regions, in less than 3 *millions of years.* This calculation, moreover, is made by the elder Herschel, and in reference merely to those comparatively proximate clusters within the scope of his own telescope. There *are* "nebulæ," however, which, through the magical tube of Lord Rosse, are this instant whispering in our ears the secrets of *a million of ages* by-gone. In a word, the events which we behold now—at this moment—in those worlds—are the identical events which interested their inhabitants *ten hundred thousand centuries ago.* In intervals—in distances such as this suggestion force upon the *soul*—rather than upon the mind—we find, at length, a fitting climax to all hitherto frivolous considerations of *quantity.*

Our fancies thus occupied with the cosmical distances, let us take the opportunity of referring to the difficulty which we have so often experienced, while pursuing *the beaten path* of astronomical reflection, *in accounting* for the immeasurable voids alluded to—in comprehending why chasms so totally unoccupied and therefore apparently so needless, have been made to intervene between star and star—between cluster and cluster—in understanding, to be brief, a sufficient reason for the Titanic scale, in respect of mere *Space,* on which the Universe is seen to be constructed. A rational cause for the phænomenon, I maintain that Astronomy has palpably failed to assign:—but the considerations through which, in this Essay, we have proceeded step by step, enable us clearly and immediately to perceive that *Space and Duration are one.* That the Universe might *endure* throughout an æra at all commensurate with the grandeur of its component material portions and with the high majesty of its spiritual purposes, it was necessary that the original atomic diffusion be made to so inconceivable an extent as to be only not infinite. It was required, in a word, that the stars should be gathered into visibility from invisible nebulosity—proceed from nebulosity to consolidation—and so grow grey in giving birth and death to unspeakably numerous and complex variations of vitalic development:—it was required that the stars should do all this—should have time thoroughly to accomplish all these Divine purposes—*during the period* in which all things were effecting their return into Unity with a velocity accumulating in the inverse proportion of the squares of the distances at which lay the inevitable End.

Throughout all this we have no difficulty in understanding the absolute accuracy of the Divine *adaptation.* The density of the stars, respectively, proceeds, of course, as their condensation diminishes; condensation and heterogeneity keep pace with each other, through the latter, which is the index of the former, we estimate the vitalic and spiritual development. Thus, in the density of the globes, we have the measure in which their purposes are fulfilled. *As* density proceeds—*as* the Divine intentions *are* accomplished—*as* less and still less remains *to be* accomplished—so—in the same ratio—should we expect to find an acceleration of *the End:*—and thus the philosophical mind will easily comprehend that the Divine designs in constituting the stars, advance *mathematically* to their fulfilment:—and more; it will readily give the advance a mathematical expression; it will decide that this advance is inversely proportional with the squares of the distances of all created things from the starting-point and goal of their creation.

Not only is this Divine adaptation, however, mathematically accurate, but there is that about it which stamps it *as divine,* in distinction from that which is merely the work of human constructiveness. I allude to the complete *mutuality* of adaptation. For example; in human constructions a particular cause has a particular effect; a particular intention brings to pass a particular object; but this is all; we see no reciprocity. The effect does not re-act upon the cause; the intention does not change relations with the object. In Divine constructions the object is either design or object as we choose to regard it—and we may take at any time a cause for an effect, or the converse—so that we can never absolutely decide which is which.

To give an instance:—In polar climates the human frame, to maintain its animal heat, requires, for combustion in the capillary system, an abundant supply of highly azotized food, such as train-oil. But again:—in polar climates nearly the sole food afforded man is the oil of abundant seals and whales. Now, whether is oil at hand because imperatively demanded, or the only thing demanded because the only thing to be obtained? It is impossible to decide. There is an absolute *reciprocity of adaptation.*

The pleasure which we derive from any display of human ingenuity is in the ratio of *the approach* to this species of reciprocity. In the construction of *plot,* for example, in fictitious literature, we should aim at so arranging the incidents that we shall not be able to determine, of any one of them, whether it depends from any one other or upholds it. In this sense, of course, *perfection of plot* is really, or practically, unattainable—but only because it is a finite intelligence that constructs. The plots of God are perfect. The Universe is a plot of God.

And now we have reached a point at which the intellect is forced, again, to struggle against its propensity for analogical inference—against its monomaniac grasping at the infinite. Moons have been seen *revolving* about planets; planets about stars; and the poetical instinct of humanity—its instinct of the symmetrical, if the symmetry be but a symmetry of surface:—this *instinct,* which the Soul, not only of Man but of all created beings, took up, in the beginning, from the *geometrical* basis of the Universal irradiation—impels us to the fancy of an endless extension of this system of *cycles.* Closing our eyes equally to *de*duction and *in*duction, we insist upon imagining a *revolution* of all the orbs of the Galaxy about some gigantic globe which we take to be the central pivot of the whole. Each cluster in the great cluster of clusters is imagined, of course, to be similarly supplied and constructed; while, that the "analogy" may be wanting at no point, we go on to conceive these clusters themselves, again, as *revolving* about some still more august sphere:—this latter, still again, *with* its encircling clusters, as but one of a yet more magnificent series of agglomerations, *gyrating* about yet another orb central *to them*—some orb still more unspeakably sublime—some orb, let us rather say, of infinite sublimity endlessly multiplied by the infinitely sublime. Such are the conditions, continued in perpetuity, which the voice of what some people term "analogy" calls upon the Fancy to depict and the Reason to contemplate, if possible, without becoming dissatisfied with the picture. Such, *in general,* are the interminable gyrations beyond gyration which we have been instructed by Philosophy to comprehend and to account for, at least in the best manner we can. Now and then, however, a philosopher proper—one whose frenzy takes a very determinate turn—whose genius, to speak more reverentially, has a strongly-pronounced washer-womanish bias, doing every thing up by the dozen—enables us to see *precisely* that point out of sight, at which the revolutionary processes in question do, and of right ought to, come to an end.

It is hardly worth while, perhaps, even to sneer at the reveries of Fourrier:—but much has been said, latterly, of the hypothesis of Mädler—that there exists, in the centre of the Galaxy, a stupendous globe about which all the systems of the cluster revolve. The *period* of our own, indeed, has been stated—117 millions of years.

That our Sun has a motion in space, independently of its rotation, and revolution about the system's centre of gravity, has long been suspected. This motion, granting it to exist, would be manifested perspectively. The stars in that firmamental region which we were leaving behind us, would, in a very long series of years, become crowded; those in the opposite quarter, scattered. Now, by means of astronomical History, we ascertain, cloudily, that some such phænomena have occurred. On this ground it has been declared that our system is moving to a point in the heavens diametrically opposite the star Zeta Herculis:—but this inference is, perhaps, the maximum to which we have any logical right. Mädler, however, has gone so far as to designate a particular star, Alcyone in the

Pleiades, as being at or about the very spot around which a general *revolution* is performed.

Now, since by "analogy" we are led, in the first instance, to these dreams, it is no more than proper that we should abide by analogy, at least in some measure, during their development; and that analogy which suggests the revolution, suggests at the same time a central orb about which it should be performed:—so far the astronomer was consistent. This central orb, however, should, dynamically, be greater than all the orbs, taken together, which surround it. Of these there are about 100 millions. "Why, then," it was of course demanded, "do we not *see* this vast central sun—*at least equal* in mass to 100 millions of such suns as ours—why do we not *see* it—*we,* especially, who occupy the mid region of the cluster—the very locality *near* which, at all events, must be situated this incomparable star?" The reply was ready—"It must be non-luminous, as are our planets." Here, then, to suit a purpose, analogy is suddenly let fall. "Not so," it may be said—"we know that non-luminous suns actually exist." It is true that we have reason at least for supposing so; but we have certainly no reason whatever for supposing that the non-luminous suns in question are encircled by *luminous* suns, while these again are surrounded by non-luminous planets:—and it is precisely all this with which Mädler is called upon to find any thing analogous in the heavens—for it is precisely all this which he imagines in the case of the Galaxy. Admitting the thing to be so, we cannot help here picturing to ourselves how sad a puzzle the *why is it so* must prove to all *a priori* philosophers.

But granting, in the very teeth of analogy and of every thing else, the non-luminosity of the vast central orb, we may still inquire how this orb, so enormous, could fail of being rendered visible by the flood of light thrown upon it from the 100 millions of glorious suns glaring in all directions about it. Upon the urging of this question, the idea of an actually solid central sun appears, in some measure, to have been abandoned; and speculation proceeded to assert that the systems of the cluster perform their revolutions merely about an immaterial centre of gravity common to all. Here again then, to suit a purpose, analogy is let fall. The planets of our system revolve, it is true, about a common centre of gravity; but they do this in connection with, and in consequence of, a material sun whose mass more than counterbalances the rest of the system.

The mathematical circle is a curve composed of an infinity of straight lines. But this idea of the circle—an idea which, in view of all ordinary geometry, is merely the mathematical, as contra-distinguished from the practical, idea—is, in sober fact, the *practical* conception which alone we have any right to entertain in regard to the majestic circle with which we have to deal, at least in fancy, when we suppose our system revolving about a point in the centre of the Galaxy. Let the most vigorous of human imaginations attempt but to take a single step towards the comprehension of a sweep so ineffable! It would scarcely be paradoxical to say that a flash of lightning itself, travelling *forever* upon the circumference of this unutterable circle, would still, *forever*, be travelling in a straight line. That the path of our Sun in such an orbit would, to any human perception, deviate in the slightest degree from a straight line, even in a million of years, is a proposition not to be entertained: —yet we are required to believe that a curvature has become apparent during the brief period of our astronomical history—during a mere point —during the utter nothingness of two or three thousand years.

It may be said that Mädler *has* really ascertained a curvature in the direction of our system's now well-established progress through Space. Admitting, if necessary, this fact to be in reality such, I maintain that nothing is thereby shown except the reality of this fact—the fact of a curvature. For its *thorough* determination, ages will be required; and, when determined, it will be found indicative of some binary or other multiple relation between our Sun and some one or more of the proximate stars. I hazard nothing however, in predicting, that, after the lapse of many centuries, all efforts at determining the path of our Sun through Space, will be abandoned as fruitless. This is easily conceivable when we look at the infinity of perturbation it must experience, from its perpetually-shifting relations with other orbs, in the common approach of all to the nucleus of the Galaxy.

But in examining other "nebulæ" than that of the Milky Way—in surveying, generally, the clusters which overspread the heavens—do we or do we not find confirmation of Mädler's hypothesis? We do *not*. The forms of the clusters are exceedingly diverse when casually viewed; but on close inspection, through powerful telescopes, we recognise the sphere, very distinctly, as at least the proximate form of all:—their constitution, in general, being at variance with the idea of revolution about a common centre.

"It is difficult," says Sir John Herschel, "to form any conception of the dynamical state of such systems. On one hand, without a rotary motion and a centrifugal force, it is hardly possible not to regard them as in a state of *progressive collapse.* On the other, granting such a motion and such a force, we find it no less difficult to reconcile their forms with the rotation of the whole system [meaning cluster] around any single axis, without which internal collision would appear to be inevitable."

Some remarks lately made about the "nebulæ" by Dr. Nichol, in taking quite a different view of the cosmical conditions from any taken in this Discourse—have a very peculiar applicability to the point now at issue. He says:

"When our greatest telescopes are brought to bear upon them, we find that those which were thought to be irregular, are not so; they approach nearer to a globe. Here is one that looked oval; but Lord Rosse's telescope brought it into a circle. . . . Now there occurs a very remarkable circumstance in reference to these comparatively sweeping circular masses of nebulæ. We find they are not entirely circular, but the reverse; and that all around them, on every side, there are volumes of stars, *stretching out apparently as if they were rushing towards a great central mass in consequence of the action of some great power.*'"[*]

Were I to describe, in my own words, what must necessarily be the existing condition of each nebula on the hypothesis that all matter is, as I suggest, now returning to its original Unity, I should simply be going over, nearly verbatim, the language here employed by Dr. Nichol, without the faintest suspicion of that stupendous truth which is the key to these nebular phænomena.

And here let me fortify my position still farther, by the voice of a greater than Mädler—of one, moreover, to whom all the data of Mädler have long been familiar things, carefully and thoroughly considered. Referring to the elaborate calculations of Argelander—the very researches which form Mädler's basis—*Humboldt*, whose generalizing powers have never, perhaps, been equalled, has the following observation:

"When we regard the real, proper, or non-perspective motions of the stars, we find *many groups of them moving in opposite directions;*

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[*] I must be understood as denying, *especially*, only the *revolutionary* portion of Mädler's hypothesis. Of course, if no great central orb exists *now* in our cluster, such will exist hereafter. Whenever existing, it will be merely the nucleus of the consolidation.

and the data as yet in hand render it not necessary, at least, to conceive that the systems composing the Milky Way, or the clusters, generally, composing the Universe, are revolving about any particular centre unknown, whether luminous or non-luminous. It is but Man's longing for a fundamental First Cause, that impels both his intellect and fancy to the adoption of such an hypothesis.''[*]

The phænomenon here alluded to—that of "many groups moving in opposite directions"—is quite inexplicable by Mädler's idea; but arises, as a necessary consequence, from that which forms the basis of this Discourse. While the *merely general direction* of each atom—of each moon, planet, star, or cluster—would, on my hypothesis, be, of course, absolutely rectilinear, while the *general* path of all bodies would be a right line leading to the centre of all; it is clear, nevertheless, that this general rectilinearity would be compounded of what, with scarcely any exaggeration, we may term an infinity of particular curves—an infinity of local deviations from rectilinearity—the result of continuous differences of relative position among the multitudinous masses, as each proceeded on its own proper journey to the End.

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[*] Betrachtet man die nicht perspectivischen eigenen Bewegungen der Sterne, so scheinen viele gruppenweise in ihrer Richtung entgegengesetzt; und die bisher gesammelten Thatsachen machen es auf's wenigste nicht nothwendig, anzunehmen, dass alle Theile unserer Sternenschicht oder gar der gesammten Sterneninseln, welche den Weltraum füllen, sich um einen grossen, unbekannten, leuchtenden oder dunkeln Centralkörper bewegen. Das Streben nach den letzten und höchsten Grundursachen macht freilich die reflectirende Thätigkeit des Menschen, wie seine Phantasie, zu einer solchen Annahme geneigt.

I quoted, just now, from Sir John Herschel, the following words, used in reference to the clusters:—"On one hand, without a rotary motion and a centrifugal force, it is hardly possible not to regard them as in a state of *progressive collapse.*" The fact is, that, in surveying the "nebulæ" with a telescope of high power, we shall find it quite impossible, having once conceived this idea of "collapse," not to gather, at all points, corroboration of the idea. A nucleus is always apparent, in the direction of which the stars seem to be precipitating themselves; nor can these nuclei be mistaken for merely perspective phænomena:—the clusters are *really* denser near the centre—sparser in the regions more remote from it. In a word, we see every thing as we *should* see it were a collapse taking place; but, in general, it may be said of these clusters, that we can fairly entertain, while looking at them, the idea of *orbitual movement about a centre,* only by admitting the *possible* existence, in the distant domains of space, of dynamical laws with which *we* are unacquainted.

On the part of Herschel, however, there is evidently *a reluctance* to regard the nebulæ as in "a state of progressive collapse." But if facts —if even appearances justify the supposition of their being in this state, *why,* it may well be demanded, is he disinclined to admit it? Simply on account of a prejudice;—merely because the supposition is at war with a pre-conceived and utterly baseless notion—that of the endlessness—that of the eternal stability of the Universe.

If the propositions of this Discourse are tenable, the "state of progressive collapse" is *precisely* that state in which alone we are warranted in considering All Things; and, with due humility, let me here confess that, for my part, I am at a loss to conceive how any *other* understanding of the existing condition of affairs could ever have made its way into the human brain. "The tendency to collapse," and "the attraction of gravitation" are convertible phrases. In using either, we speak of the reaction of the First Act. Never was necessity less obvious than that of supposing Matter imbued with an ineradicable *equality* forming part of its material nature—a quality, or instinct, *forever* inseparable from it, and by dint of which inalienable principle every atom is *perpetually* impelled to seek its fellow-atom. Never was necessity less obvious than that of entertaining this unphilosophical idea. Going boldly behind the vulgar thought, we have to conceive, metaphysically, that the gravitating principle appertains to Matter *temporarily*—only while diffused—only while existing as Many instead of as One—appertains to it by virtue of its state of irradiation alone—appertains, in a word, altogether to its *condition*, and not in the slightest degree to *itself*. In this view, when the irradiation shall have returned into its source—when the reaction shall be completed—the gravitating principle will no longer exist. And, in fact, astronomers, without at any time reaching the idea here suggested, seem to have been approximating it, in the assertion that "if there were but one body in the universe, it would be impossible to understand how the principle, Gravity, could obtain:" that is to say, from a consideration of Matter as they find it, they reach a conclusion at which I deductively arrive. That so pregnant a suggestion as the one quoted should have been permitted to remain so long unfruitful, is, nevertheless, a mystery which I find it difficult to fathom.

It is perhaps, in no little degree, however, our propensity for the continuous—for the analogical—in the present case more particularly for the symmetrical—which has been leading us astray. And, in fact, the sense of the symmetrical is an instinct which may be depended upon with an almost blindfold reliance. It is the poetical essence of the Universe—*of the Universe,* which, in the supremeness of its symmetry, is but the most sublime of poems. Now symmetry and consistency are convertible terms:—thus Poetry and Truth are one. A thing is consistent in the ratio of its truth—true in the ratio of its consistency. *A perfect consistency, I repeat, can be nothing but an absolute truth.* We may take it for granted, then, that Man cannot long or widely err, if he suffer himself to be guided by his poetical, which I have maintained to be his truthful, in being his symmetrical, instinct. He must have a care, however, lest, in pursuing too heedlessly the superficial symmetry of forms and motions, he leave out of sight the really essential symmetry of the principles which determine and control them.

That the stellar bodies would finally be merged in one—that, at last, all would be drawn into the substance of *one stupendous central orb already existing*—is an idea which, for some time past, seems, vaguely and indeterminately, to have held possession of the fancy of mankind. It is an idea, in fact, which belongs to the class of the *excessively obvious*. It springs, instantly, from a superficial observation of the cyclic and seemingly *gyrating* or *vorticial* movements of those individual portions of the Universe which come most immediately and most closely under our observation. There is not, perhaps, a human being, of ordinary education and of average reflective capacity, to whom, at some period, the fancy in question has not occurred, as if spontaneously, or intuitively, and wearing all the character of a very profound and very original conception. This conception, however, so commonly entertained, has never, within my knowledge, arisen out of any abstract considerations. Being, on the contrary, always suggested, as I say, by the vorticial movements about centres, a reason for it, also,—a *cause* for the ingathering of all the orbs into one, *imagined to be already existing*, was naturally sought in the same direction—among these cyclic movements themselves.

Thus it happened that, on announcement of the gradual and perfectly regular decrease observed in the orbit of Encke's comet, at every successive revolution about our Sun, astronomers were nearly unanimous in the opinion that the cause in question was found—that a principle was discovered sufficient to account, physically, for that final, universal agglomeration which, I repeat, the analogical, symmetrical, or poetical instinct of man had pre-determined to understand as something more than a simple hypothesis.

This cause—this sufficient reason for the final ingathering—was declared to exist in an exceedingly rare but still material medium pervading space; which medium, by retarding, in some degree, the progress of the comet, perpetually weakened its tangential force; thus giving a predominance to the centripetal; which, of course, drew the comet nearer and nearer at each revolution, and would eventually precipitate it upon the Sun.

All this was strictly logical—admitting the medium or ether; but this ether was assumed, most illogically, on the ground that no *other* mode than the one spoken of could be discovered, of accounting for the observed decrease in the orbit of the comet:—as if from the fact that we could *discover* no other mode of accounting for it, it followed, in any respect, that no other mode of accounting for it existed. It is clear that innumerable causes might operate, in combination, to diminish the orbit, without even a possibility of our ever becoming acquainted with one of them. In the meantime, it has never been fairly shown, perhaps, why the retardation occasioned by the skirts of the Sun's atmosphere, through which the comet passes at perihelion, is not enough to account for the phænomenon. That Encke's comet will be absorbed into the Sun, is probable; that all the comets of the system will be absorbed, is more than merely possible; but, in such case, the principle of absorption must be referred to eccentricity or orbit—to the close approximation to the Sun, of the comets at their perihelia; and is a principle not affecting, in any degree, the ponderous *spheres*, which are to be regarded as the true material constituents of the Universe. Touching comets in general, let me here suggest, in passing, that we cannot be far wrong in looking upon them as the *lightning-flashes of the cosmical Heaven.*

The idea of retarding ether, and, through it, of a final agglomeration of all things, seemed at one time, however, to be confirmed by the observation of a positive decrease in the orbit of the solid moon. By reference to eclipses recorded 2500 years ago, it was found that the velocity of the satellite's revolution *then* was considerably less than it is *now;* that on the hypothesis that its motion in its orbit is uniformly in accordance with Kepler's law, and was accurately determined *then*—2500 years ago—it is now in advance of the position it *should* occupy, by nearly 9000 miles. The increase of velocity proved, of course, a diminution of orbit; and astronomers were fast yielding to a belief in an ether, as the sole mode of accounting for the phænomenon, when Lagrange came to the rescue. He showed that, owing to the configurations of the spheroids, the shorter axes of their ellipses are subject to variation in length; the longer axes being permanent; and that this variation is continuous and vibratory—so that every orbit is in a state of transition, either from circle to ellipse, or from ellipse to circle. In the case of the moon, where the shorter axis is *de*creasing, the orbit is passing from circle to ellipse, and, consequently, is *de*creasing too; but, after a long series of ages, the ultimate eccentricity will be attained; then the shorter axis will proceed to *in*crease, until the orbit becomes a circle; when the process of shortening will again take place;—and so on forever. In the case of the Earth, the orbit is passing from ellipse to circle. The facts thus demonstrated do away, of course, with all necessity for supposing an ether, and with all apprehension of the system's instability—on the ether's account.

It will be remembered that I have myself assumed what we may term *an ether*. I have spoken of a subtle *influence* which we know to be ever in attendance upon matter, although becoming manifest only through matter's heterogeneity. To this *influence*—without daring to touch it at all in any effort at explaining its awful *nature*—I have referred the various phænomena of electricity, heat, light, magnetism; and more—of vitality, consciousness, and thought—in a word, of spirituality. It will be seen, at once, then, that the ether thus conceived is radically distinct from the ether of the astronomers; inasmuch as theirs is *matter* and mine *not*.

With the idea of material ether, seems, thus, to have departed altogether the thought of that universal agglomeration so long predetermined by the poetical fancy of mankind:—an agglomeration in which a sound Philosophy might have been warranted in putting faith, at least to a certain extent, if for no other reason than that by this poetical fancy it *had* been so predetermined. But so far as Astronomy—so far as mere Physics have yet spoken, the cycles of the Universe has no conceivable end. Had an end been demonstrated, however, from so purely collateral a cause as an ether, Man's instinct of the Divine *capacity to adapt,* would have rebelled against the demonstration. We should have been forced to regard the Universe with some such sense of dissatisfaction as we experience in contemplating an unnecessarily complex work of human art. Creation would have affected us as an imperfect *plot* in a romance, where the *dénouement* is awkwardly brought about by interposed incidents external and foreign to the main subject; instead of springing out of the bosom of the thesis—out of the heart of the ruling idea—instead of arising as a result of the primary proposition—as inseparable and inevitable part and parcel of the fundamental conception of the book.

What I mean by the symmetry of mere surface will now be more clearly understood. It is simply by the blandishment of this symmetry that we have been beguiled into the general idea of which Mädler's hypothesis is but a part—the idea of the vorticial indrawing of the orbs. Dismissing this nakedly physical conception, the symmetry of principle sees the end of all things metaphysically involved in the thought of a beginning; seeks and finds in this origin of all things the *rudiment* of this end; and perceives the impiety of supposing this end likely to be brought about less simply—less directly—less obviously—less artistically—than through *the reaction of the originating Act.*

Recurring, then, to a previous suggestion, let us understand the systems—let us understand each star, with its attendant planets—as but a Titanic atom existing in space with precisely the same inclination for Unity which characterized, in the beginning, the actual atoms after their irradiation throughout the Universal sphere. As these original atoms rushed towards each other in generally straight lines, so let us conceive as at least generally rectilinear, the paths of the system-atoms towards their respective centres of aggregation:—and in this direct drawing together of the systems into clusters, with a similar and simultaneous drawing together of the clusters themselves while undergoing consolidation, we have at length attained the great *Now*—the awful Present—the Existing Condition of the Universe.

Of the still more awful Future a not irrational analogy may guide us in framing an hypothesis. The equilibrium between the centripetal and centrifugal forces of each system, being necessarily destroyed upon attainment of a certain proximity to the nucleus of the cluster to which it belongs, there must occur, at once, a chaotic or seemingly chaotic precipitation, of the moons upon the planets, of the planets upon the suns, and of the suns upon the nuclei; and the general result of this precipitation must be the gathering of the myriad now-existing stars of the firmament into an almost infinitely less number of almost infinitely superior spheres. In being immeasurably fewer, the worlds of that day will be immeasurably greater than our own. Then, indeed, amid unfathomable abysses, will be glaring unimaginable suns. But all this will be merely a climacic magnificence foreboding the great End. Of this End the new genesis described, can be but a very partial postponement. While undergoing consolidation, the clusters themselves, with a speed prodigiously accumulative, have been rushing towards their own general centre—and now, with a thousand-fold electric velocity, commensurate only with their material grandeur and with the spiritual passion of their appetite for oneness, the majestic remnants of the tribe of Stars flash, at length, into a common embrace. The inevitable catastrophe is at hand.

But this catastrophe—what is it? We have seen accomplished the ingathering of the orbs. Henceforward, are we not to understand *one material globe of globes* as constituting and comprehending the Universe? Such a fancy would be altogether at war with every assumption and consideration of this Discourse.

I have already alluded to that absolute *reciprocity of adaptation* which is the idiosyncrasy of the divine Art—stamping it divine. Up to this point of our reflections, we have been regarding the electrical influence as a something by dint of whose repulsion alone Matter is enabled to exist in that state of diffusion demanded for the fulfilment of its purposes:—so far, in a word, we have been considering the influence in question as ordained for Matter's sake to subserve the objects of matter. With a perfectly legitimate reciprocity, we are now permitted to look at Matter, as created *solely for the sake of this influence*—solely to serve the objects of this spiritual Ether. Through the aid—by the means—through the agency of Matter, and by dint of its heterogeneity—is this Ether manifested—is *Spirit individualized.* It is merely in the development of this Ether, through heterogeneity, that particular masses of Matter become animate—sensitive—and in the ratio of their heterogeneity;—some reaching a degree of sensitiveness involving what we call *Thought,* and thus attaining Conscious Intelligence.

In this view, we are enabled to perceive Matter as a Means—not as an End. Its purposes are thus seen to have been comprehended in its diffusion; and with the return into Unity these purposes cease. The absolutely consolidated globe of globes would be *objectless*—therefore not for a moment could it continue to exist. Matter, created for an end, would unquestionably, on fulfilment of that end, be Matter no longer. Let us endeavor to understand that it would disappear, and that God would remain all in all.

That every work of Divine conception must coexist and coexpire with its particular design, seems to me especially obvious; and I make no doubt that, on perceiving the final globe of globes to be *objectless*, the majority of my readers will be satisfied with my "*therefore* it cannot continue to exist." Nevertheless, as the startling thought of its instantaneous disappearance is one which the most powerful intellect cannot be expected readily to entertain on grounds so decidedly abstract, let us endeavor to look at the idea from some other and more ordinary point of view:—let us see how thoroughly and beautifully it is corroborated in an *a posteriori* consideration of Matter as we actually find it.

I have before said that "Attraction and Repulsion being undeniably the sole properties by which Matter is manifested to Mind, we are justified in assuming that Matter *exists* only as Attraction and Repulsion—in other words that Attraction and Repulsion *are* Matter; there being no conceivable case in which we may not employ the term Matter and the terms 'Attraction' and 'Repulsion' taken together, as equivalent, and therefore convertible, expressions of Logic."*

Now the very definition of Attraction implies particularity—the existence of parts, particles, or atoms, for we define it as the tendency of "each atom, &c., to every other atom," &c., according to a certain law. Of course where there are *no* parts—where there is absolute Unity—where the tendency to oneness is satisfied—there can be no Attraction:—this has been fully shown, and all Philosophy admits it. When, on fulfilment of its purposes, then, Matter shall have returned into its original condition of *One*—a condition which presupposes the expulsion of the separative ether, whose province and whose capacity are limited to keeping the atoms apart until that great day when, this ether being no longer needed, the overwhelming pressure of the finally collective Attraction shall at length just sufficiently predominate* and expel it:—when, I say, Matter, finally, expelling the Ether, shall have returned into absolute Unity,—it will then (to speak paradoxically for the moment) be Matter without Attraction and without Repulsion—in other words, Matter without Matter—in other words, again, *Matter no more.* In sinking into Unity, it will sink at once into that Nothingness which, to all Finite Perception, Unity must be—into that Material Nihility from which alone we can conceive it to have been evoked—to have been *created* by the Volition of God.

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* Page 38—Paragraph commencing, "Discarding now."

I repeat, then—Let us endeavor to comprehend that the final globe of globes will instantaneously disappear, and that God will remain all in all.

But are we here to pause? Not so. On the Universal agglomeration and dissolution, we can readily conceive that a new and perhaps totally different series of conditions may ensue—another creation and irradiation, returning into itself—another action and reaction of the Divine Will. Guiding our imaginations by that omniprevalent law of laws, the law of periodicity, are we not, indeed, more than justified in entertaining a belief—let us say, rather, in indulging a hope—that the processes we have here ventured to contemplate will be renewed forever, and forever, and forever; a novel Universe swelling into existence, and then subsiding into nothingness, at every throb of the Heart Divine?

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* "Gravity, therefore, must be the strongest of forces."—See page 42—Paragraph commencing, "Now to what."

And now—this Heart Divine—what is it? *It is our own.*

Let not the merely seeming irreverence of this idea frighten our souls from that cool exercise of consciousness—from that deep tranquillity of self-inspection—through which alone we can hope to attain the presence of this, the most sublime of truths, and look it leisurely in the face.

The *phænomena* on which our conclusions must at this point depend, are merely spiritual shadows, but not the less thoroughly substantial.

We walk about, amid the destinies of our world-existence, encompassed by dim but ever present *Memories* of a Destiny more vast—very distant in the by-gone time, and infinitely awful.

We live out a Youth peculiarly haunted by such dreams; yet never mistaking them for dreams. As Memories we *know* them. *During our Youth* the distinction is too clear to deceive us even for a moment.

So long as this Youth endures, the feeling *that we exist*, is the most natural of all feelings. We understand it *thoroughly*. That there was a period at which we did *not* exist—or, that it might so have happened that we never had existed at all—are the considerations, indeed, which *during this youth*, we find difficulty in understanding. Why we should *not* exist, is, *up to the epoch of our Manhood*, of all queries the most unanswerable. Existence—self-existence—existence from all Time and to all Eternity—seems, up to the epoch of Manhood, a normal and unquestionable condition:—*seems, because it is.*

But now comes the period at which a conventional World-Reason awakens us from the truth of our dream. Doubt, Surprise and Incomprehensibility arrive at the same moment. They say:—"You live, and the time was when you lived not. You have been created. An Intelligence exists greater than your own; and it is only through this Intelligence you live at all." These things we struggle to comprehend and cannot:—*cannot*, because these things, being untrue, are thus, of necessity, incomprehensible.

No thinking being lives who, at some luminous point of his life of thought, has not felt himself lost amid the surges of futile efforts at understanding or believing, that anything exists *greater than his own soul.* The utter impossibility of any one's soul feeling itself inferior to another; the intense, overwhelming dissatisfaction and rebellion at the thought:—these, with the omniprevalent aspirations at perfection, are but the spiritual, coincident with the material, struggles towards the original Unity—are, to my mind at least, a species of proof far surpassing what Man terms demonstration, that no one soul *is* inferior to another—that nothing is, or can be, superior to any one soul—that each soul is, in part, its own God—its own Creator:—in a word, that God—the material *and* spiritual God—*now* exists solely in the diffused Matter and Spirit of the Universe; and that the regathering of this diffused Matter and Spirit will be but the reconstitution of the *purely* Spiritual and Individual God.

In this view, and in this view alone, we comprehend the riddles of Divine Injustice—or Inexorable Fate. In this view alone the existence of Evil becomes intelligible; but in this view it becomes more—it becomes endurable. Our souls no longer rebel at a *Sorrow* which we ourselves have imposed upon ourselves, in furtherance of our own purposes—with a view—if even with a futile view—to the extension of our own *Joy*.

I have spoken of *Memories* that haunt us during our youth. They sometimes pursue us even in our Manhood:—assume gradually less and less indefinite shapes:—now and then speak to us with low voices, saying:

"There was an epoch in the Night of Time, when a still-existent Being existed—one of an absolutely infinite number of similar Beings that people the absolutely infinite domains of the absolutely infinite space.* It was not and is not in the power of this Being—any more than it is in your own—to extend, by actual increase, the joy of his Existence; but just as it *is* in your power to expand or to concentrate your pleasures (the absolute amount of happiness remaining always the same) so did and does a similar capability appertain to this Divine Being, who thus passes his Eternity in perpetual variation of Concentrated Self and almost Infinite Self-Diffusion. What you call The Universe is but his present expansive existence. He now feels his life through an infinity of imperfect pleasures—the partial and pain-intertangled pleasures of those inconceivably numerous things which you designate as his creatures, but which are really but infinite individualizations of Himself. All these creatures—*all*—those which you term animate, as well as those to whom you deny life for no better reason than that you do not behold it in operation—*all* these creatures have, in a greater or less degree, a capacity for pleasure and for pain:—*but the general sum of their sensations is precisely that amount of Happiness which appertains by right to the Divine Being when concentrated within Himself.* These creatures are all too, more or less conscious Intelligences; conscious, first, of a proper identity; conscious, secondly, and by faint indeterminate glimpses, of an identity with the Divine Being of whom we speak—of an identity with God. Of the two classes of consciousness, fancy that the former will grow weaker, the latter stronger, during the long succession of ages which must elapse before these myriads of individual Intelligences become blended—when the bright stars become blended—into One. Think that the sense of individual identity will be gradually merged in the general consciousness—that Man, for example, ceasing imperceptibly to feel himself Man, will at length attain that awfully triumphant epoch when he shall recognise his existence as that of Jehovah. In the meantime bear in mind that all is Life—Life—Life within Life —the less within the greater, and all within the *Spirit Divine.*

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* See pages 110 and 111—Paragraph commencing "I reply that the right," and ending "*proper and particular God.*"

# THE POWER OF WORDS

[Published in the *Democratic Review*, June, 1845.]

*Oinos.*—Pardon, Agathos, the weakness of a spirit new-fledged with immortality!

*Agathos.*—You have spoken nothing, my Oinos, for which pardon is to be demanded. Not even here is knowledge a thing of intuition. For wisdom, ask of the angels freely, that it may be given!

*Oinos.*—But in this existence, I dreamed that I should be at once cognizant of all things, and thus at once happy in being cognizant of all.

*Agathos.*—Ah, not in knowledge is happiness, but in the acquisition of knowledge! In for ever knowing, we are for ever blessed; but to know all, were the curse of a fiend.

*Oinos.*—But does not The Most High know all?

*Agathos.*—*That* (since he is The Most Happy) must be still the *one* thing unknown even to HIM.

*Oinos.*—But, since we grow hourly in knowledge, must not *at last* all things be known?

*Agathos.*—Look down into the abysmal distances!—attempt to force the gaze down the multitudinous vistas of the stars, as we sweep slowly through them thus—and thus—and thus! Even the spiritual vision, is it not at all points arrested by the continuous golden walls of the universe?—the walls of the myriads of the shining bodies that mere number has appeared to blend into unity?

*Oinos.*—I clearly perceive that the infinity of matter is no dream.

*Agathos.*—There are *no* dreams in Aidenn—but it is here whispered that, of this infinity of matter, the *sole* purpose is to afford infinite springs, at which the soul may allay the thirst *to know* which is for ever unquenchable within it—since to quench it, would be to extinguish the soul's self. Question me then, my Oincs, freely and without fear. Come! we will leave to the left the loud harmony of the Pleiades, and swoop outward from the throne into the starry meadows beyond Orion, where, for pansies and violets, and heart's-ease, are the beds of the triplicate and triple-tinted suns.

*Oinos.*—And now, Agathos, as we proceed, instruct me!—speak to me in the earth's familiar tones! I understood not what you hinted to me, just now, of the modes or of the methods of what, during mortality, we were accustomed to call Creation. Do you mean to say that the Creator is not God?

*Agathos.*—I mean to say that the Deity does not create.

*Oinos.*—Explain!

*Agathos.*—In the beginning *only*, he created.

The seeming creatures which are now, throughout the universe, so perpetually springing into being, can only be considered as the mediate or indirect, not as the direct or immediate results of the Divine creative power.

*Oinos.*—Among men, my Agathos, this idea would be considered heretical in the extreme.

*Agathos.*—Among angels, my Oinos, it is seen to be simply true.

*Oinos.*—I can comprehend you thus far—that certain operations of what we term Nature, or the natural laws, will, under certain conditions, give rise to that which has all the *appearance* of creation. Shortly before the final overthrow of the earth, there were, I well remember, many very successful experiments in what some philosophers were weak enough to denominate the creation of animalculæ.

*Agathos.*—The cases of which you speak were, in fact, instances of the secondary creation—and of the *only* species of creation which has ever been, since the first word spoke into existence the first law.

*Oinos.*—Are not the starry worlds that, from the abyss of nonentity, burst hourly forth into the heavens—are not these stars, Agathos, the immediate handiwork of the King?

*Agathos.*—Let me endeavor, my Oinos, to lead you, step by step, to the conception I intend. You are well aware that, as no thought can perish, so no act is without infinite result. We moved our hands, for example, when we were dwellers on the earth, and, in so doing, we gave vibration to the atmosphere which engirdled it. This vibration was indefinitely extended, till it gave impulse to every particle of the earth's air, which thenceforward, *and for ever,* was actuated by the one movement of the hand. This fact the mathematicians of our globe well knew. They made the special effects, indeed, wrought in the fluid by special impulses, the subject of exact calculation—so that it became easy to determine in what precise period an impulse of given extent would engirdle the orb, and impress (for ever) every atom of the atmosphere circumambient. Retrograding, they found no difficulty, from a given effect, under given conditions, in determining the value of the original impulse. Now the mathematicians who saw that the results of any given impulse were absolutely endless—and who saw that a portion of these results were accurately traceable through the agency of algebraic analysis—who saw, too, the facility of the retrogradation—these men saw, at the same time, that this species of analysis itself, had within itself a capacity for indefinite progress—that there were no bounds conceivable to its advancement and applicability, except within the intellect of him who advanced or applied it. But at this point our mathematicians paused.

*Oinos.*—And why, Agathos, should they have proceeded?

*Agathos.*—Because there were some considerations of deep interest beyond. It was deducible from what they knew, that to a being of infinite understanding—one to whom the *perfection* of the algebraic analysis lay unfolded—there could be no difficulty in tracing every impulse given the air—and the ether through the air—to the remotest consequences at any even infinitely remote epoch of time. It is indeed demonstrable that every such impulse *given the air,* must, *in the end,* impress every individual thing that exists *within the universe;*—and the being of infinite understanding—the being whom we have imagined—might trace the remote undulations of the impulse—trace them upward and onward in their influences upon all particles of all matter—upward and onward for ever in their modifications of old forms—or, in other words, *in their creation of new*—until he found them reflected—unimpressive *at last*—back from the throne of the Godhead. And not only could such a being do this, but at any epoch, should a given result be afforded him—should one of these numberless comets, for example, be presented to his inspection—he could have no difficulty in determining, by the analytic retrogradation, to what original impulse was due. This power of retrogradation in its absolute fulness and perfection—this faculty of referring at *all* epochs, *all* effects to *all* causes—is of course the prerogative of the Deity alone—but in every variety of degree, short of the absolute perfection, is the power itself exercised by the whole host of the Angelic Intelligences.

*Oinos.*—But you speak merely of impulses upon the air.

*Agathos.*—In speaking of the air, I referred only to the earth: but the general proposition has reference to impulses upon the ether—which, since it pervades, and alone pervades all space, is thus the great medium of *creation*.

*Oinos.*—Then all motion, of whatever nature, creates?

*Agathos.*—It must: but a true philosophy has long taught that the source of all motion is thought—and the source of all thought is——

*Oinos.*—God.

*Agathos.*—I have spoken to you, Oinos, as to a child of the fair Earth which lately perished—of impulses upon the atmosphere of the Earth.

*Oinos.*—You did.

*Agathos.*—And while I thus spoke, did there not cross your mind some thought of the *physical power of words?* Is not every word an impulse on the air?

*Oinos.*—But why, Agathos, do you weep—and why, oh, why do your wings droop as we hover above this fair star—which is the greenest and yet most terrible of all we have encountered in our flight? Its brilliant flowers look like a fairy dream—but its fierce volcanoes like the passions of a turbulent heart.

*Agathos.*—They *are!*—they *are!* This wild star—it is now three centuries since, with clasped hands, and with streaming eyes, at the feet of my beloved—I spoke it—with a few passionate sentences—into birth. Its brilliant flowers *are* the dearest of all unfulfilled dreams, and its raging volcanoes *are* the passions of the most turbulent and unhallowed of hearts.

# THE COLLOQUY OF MONOS AND UNA

[Published in *Graham's Magazine*, August, 1841.]

Μέλλοντα ταῦτα.

*Sophocles—Antig:*
*These things are in the future.*

*Una.*—"Born again?"

*Monos.*—Yes, fairest and best beloved Una, "born again." These were the words upon whose mystical meaning I had so long pondered, rejecting the explanations of the priesthood, until Death himself resolved for me the secret.

*Una.*—Death!

*Monos.*—How strangely, sweet Una, you echo my words! I observe, too, a vacillation in your step—a joyous inquietude in your eyes. You are confused and oppressed by the majestic novelty of the Life Eternal. Yes, it was of Death I spoke. And here how singularly sounds that word which of old was wont to bring terror to all hearts—throwing a mildew upon all pleasures!

*Una.*—Ah, Death, the spectre which sate at all feasts! How often, Monos, did we lose ourselves in speculations upon its nature! How mysteriously did it act as a check to human bliss—saying unto it "thus far, and no farther!" That earnest mutual love, my own Monos, which burned within our bosoms—how vainly did we flatter ourselves, feeling happy in its first upspringing, that our happiness would strengthen with its strength! Alas! as it grew, so grew in our hearts the dread of that evil hour which was hurrying to separate us forever! Thus, in time, it became painful to love. Hate would have been mercy then.

*Monos.*—Speak not here of these griefs, dear Una—mine, mine forever now!

*Una.*—But the memory of past sorrow—is it not present joy? I have much to say yet of the things which have been. Above all, I burn to know the incidents of your own passage through the dark Valley and Shadow.

*Monos.*—And when did the radiant Una ask anything of her Monos in vain? I will be minute in relating all—but at what point shall the weird narrative begin?

*Una.*—At what point?

*Monos.*—You have said.

*Una.*—Monos, I comprehend you. In Death we have both learned the propensity of man to define the indefinable. I will not say, then, commence with the moment of life's cessation—but commence with that sad, sad instant when, the fever having abandoned you, you sank into a breathless and motionless torpor, and I pressed down your pallid eyelids with the passionate fingers of love.

*Monos.*—One word first, my Una, in regard to man's general condition at this epoch. You will remember that one or two of the wise among our forefathers—wise in fact, although not in the world's esteem—had ventured to doubt the propriety of the term "improvement," as applied to the progress of our civilization. There were periods in each of the five or six centuries immediately preceding our dissolution, when arose some vigorous intellect, boldly contending for those principles whose truth appears now, to our disenfranchised reason, so utterly obvious—principles which should have taught our race to submit to the guidance of the natural laws, rather than attempt their control. At long intervals some master-minds appeared, looking upon each advance in practical science as a retro-gradation in the true utility. Occasionally the poetic intellect—that intellect which we now feel to have been the most exalted of all—since those truths which to us were of the most enduring importance could only be reached by that *analogy* which speaks in proof-tones to the imagination alone, and to the unaided reason bears no weight—occasionally did this poetic intellect proceed a step farther in the evolving of the vague idea of the philosophic, and find in the mystic parable that tells of the tree of knowledge, and of its forbidden fruit, death-producing, a distinct intimation that knowledge was not meet for man in the infant condition of his soul. And these men—the poets—living and perishing amid the scorn of the "utilitarians"—of rough pedants, who arrogated to themselves a title which could have been properly applied only to the scorned—these men, the poets, pondered piningly, yet not unwisely, upon the ancient days when our wants were not more simple than our enjoyments were keen—days when *mirth* was a word unknown, so solemnly deep-toned was happiness—holy, august and blissful days, when blue rivers ran undammed, between hills unhewn, into far forest solitudes, primeval, odorous, and unexplored.

Yet these noble exceptions from the general misrule served but to strengthen it by opposition. Alas! we had fallen upon the most evil of all our evil days. The great "movement"—that was the cant term—went on: a diseased commotion, moral and physical. Art—the Arts—arose supreme, and, once enthroned, cast chains upon the intellect which had elevated them to power. Man, because he could not but acknowledge the majesty of Nature, fell into childish exultation at his acquired and still-increasing dominion over her elements. Even while he stalked a God in his own fancy, an infantine imbecility came over him. As might be supposed from the origin of his disorder, he grew infected with system, and with abstraction. He enwrapped himself in generalities. Among other odd ideas, that of universal equality gained ground; and in the face of analogy and of God—in despite of the loud warning voice of the laws of *gradation* so visibly pervading all things in Earth and Heaven—wild attempts at an omni-prevalent Democracy were made. Yet this evil sprang necessarily from the leading evil, Knowledge. Man could not both know and succumb. Meantime huge smoking cities arose, innumerable. Green leaves shrank before the hot breath of furnaces. The fair face of Nature was deformed as with the ravages of some loathsome disease. And methinks, sweet Una, even our slumbering sense of the forced and of the far-fetched might have arrested us here. But now it appears that we had worked out our own destruction in the perversion of our *taste*, or rather in the blind neglect of its culture in the schools. For, in truth, it was at this crisis that taste alone—that faculty which, holding a middle position between the pure intellect and the moral sense, could never safely have been disregarded—it was now that taste alone could have led us gently back to Beauty, to Nature, and to Life. But alas for the pure contemplative spirit and majestic intuition of Plato! Alas for the μουσική which he justly regarded as an all-sufficient education for the soul! Alas for him and for it!—since both were most desperately needed when both were most entirely forgotten or despised.[*]

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[*] "It will be hard to discover a better [method of education] than that which the experience of so many ages has already discovered; and this may be summed up as consisting in gymnastics for the body, and *music* for the soul."—Repub. lib. 2. "For this reason is a musical education most essential; since it causes Rhythm and Harmony to Penetrate most intimately into the soul, taking the strongest hold upon it, filling it with *beauty* and making the man *beautiful-minded*. . . . . He will praise and admire *the beautiful*, will receive it with joy into his soul, will feed upon it, and *assimilate his own condition with it.*"—Ibid. lib. 3. Music (μουσική) had, however, among the Athenians, a far more comprehensive signification than with us. It included not only the harmonies

Pascal, a philosopher whom we both love, has said, how truly!—"*que tout notre raisonnement se rèduit à céder au sentiment;*" and it is not impossible that the sentiment of the natural, had time permitted it, would have regained its old ascendancy over the harsh mathematical reason of the schools. But this thing was not to be. Prematurely induced by intemperance of knowledge, the old age of the world drew on. This the mass of mankind saw not, or, living lustily although unhappily, affected not to see. But, for myself, the Earth's records had taught me to look for widest ruin as the price of highest civilization. I had imbibed a prescience of our Fate from comparison of China the simple and enduring, with Assyria the architect, with Egypt the astrologer, with Nubia, more crafty than either, the turbulent mother of all Arts. In history[†] of these regions I met with a ray from the Future. The individual artificialities of the three latter were local diseases of the Earth, and in their individual overthrows we had seen local remedies applied; but for the infected world at large I could anticipate no regeneration save in death. That man, as a race, should not become extinct, I saw that he must be "*born again.*"

And now it was, fairest and dearest, that we wrapped our spirits, daily, in dreams. Now it

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of time and of tune, but the poetic diction, sentiment and creation, each in its widest sense. The study of *music* was with them, in fact, the general cultivation of the taste—of that which recognises the beautiful—in contra-distinction from reason, which deals only with the true.

[†] "History," from ἱστορεῖν, to contemplate.

was that, in twilight, we discoursed of the days to come, when the Art-scarred surface of the Earth, having undergone that purification* which alone could efface its rectangular obscenities, should clothe itself anew in the verdure and the mountain-slopes and the smiling waters of Paradise, and be rendered at length a fit dwelling-place for man:—for man the Death-purged—for man to whose now exalted intellect there should be poison in knowledge no more—for the redeemed, regenerated, blissful, and now immortal, but still for the *material*, man.

*Una.*—Well do I remember these conversations, dear Monos; but the epoch of the fiery overthrow was not so near at hand as we believed, and as the corruption you indicate did surely warrant us in believing. Men lived; and died individually. You yourself sickened, and passed into the grave; and thither your constant Una speedily followed you. And though the century which has since elapsed, and whose conclusion brings us thus together once more, tortured our slumbering senses with no impatience of duration, yet, my Monos, it was a century still.

*Monos.*—Say, rather, a point in the vague infinity. Unquestionably, it was in the Earth's dotage that I died. Wearied at heart with anxieties which had their origin in the general turmoil and decay, I succumbed to the fierce fever. After some few days of pain, and many of dreamy delirium replete with ecstasy, the manifestations of which you mistook for pain, while I longed but was impotent to undeceive you—after some days there came upon me, as you have said, a breathless and motionless torpor; and this was termed *Death* by those who stood around me.

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* The word "*purification*" seems here to be used with reference to its root in the Greek πῦρ, fire.

Words are vague things. My condition did not deprive me of sentience. It appeared to me not greatly dissimilar to the extreme quiescence of him, who, having slumbered long and profoundly, lying motionless and fully prostrate in a midsummer noon, begins to steal slowly back into consciousness, through the mere sufficiency of his sleep, and without being awakened by external disturbances.

I breathed no longer. The pulses were still. The heart had ceased to beat. Volition had not departed, but was powerless. The senses were unusually active, although eccentrically so—assuming often each other's functions at random. The taste and the smell were inextricably confounded, and became one sentiment, abnormal and intense. The rose-water with which your tenderness had moistened my lips to the last, affected me with sweet fancies of flowers—fantastic flowers, far more lovely than any of the old Earth, but whose prototypes we have here blooming around us. The eyelids, transparent and bloodless, offered no complete impediment to vision. As volition was in abeyance, the balls could not roll in their sockets—but all objects within the range of the visual hemisphere were seen with more or less distinctness; the rays which fell upon the external retina, or into the corner of the eye, producing a more vivid effect than those which struck the front or interior surface. Yet, in the former instance, this effect was so far anomalous that I appreciated it only as *sound*—sound sweet or discordant as the matters presenting themselves at my side were light or dark in shade—curved or angular in outline. The hearing, at the same time, although excited in degree, was not irregular in action—estimating real sounds with an extravagance of precision, not less than of sensibility. Touch had undergone a modification more peculiar. Its impressions were tardily received, but pertinaciously retained, and resulted always in the highest physical pleasure. Thus the pressure of your sweet fingers upon my eyelids, at first only recognised through vision, at length, long after their removal, filled my whole being with a sensual delight immeasurable. I say with a sensual delight. *All* my perceptions were purely sensual. The materials furnished the passive brain by the senses were not in the least degree wrought into shape by the deceased understanding. Of pain there was some little; of pleasure there was much; but of moral pain or pleasure none at all. Thus your wild sobs floated into my ear with all their mournful cadences, and were appreciated in their every variation of sad tone; but they were soft musical sounds and no more; they conveyed to the extinct reason no intimation of the sorrows which gave them birth; while the large and constant tears which fell upon my face, telling the bystanders of a heart which broke, thrilled every fibre of my frame with ecstasy alone. And this was in truth the *Death* of which these bystanders spoke reverently, in low whispers—you, sweet Una, gaspingly, with loud cries.

They attired me for the coffin—three or four dark figures which flitted busily to and fro. As these crossed the direct line of my vision they affected me as *forms;* but upon passing to my side their images impressed me with the idea of shrieks, groans, and other dismal expressions of terror, of horror, or of woe. You alone, habited in a white robe, passed in all directions musically about me.

The day waned; and, as its light faded away, I became possessed by a vague uneasiness—an anxiety such as the sleeper feels when sad real sounds fall continuously within his ear—low distant bell-tones, solemn, at long but equal intervals, and commingling with melancholy dreams. Night arrived; and with its shadows a heavy discomfort. It oppressed my limbs with the oppression of some dull weight, and was palpable. There was also a moaning sound, not unlike the distant reverberation of surf, but more continuous, which, beginning with the first twilight, had grown in strength with the darkness. Suddenly lights were brought into the room, and this reverberation became forthwith interrupted into frequent unequal bursts of the same sound, but less dreary and less distinct. The ponderous oppression was in a great measure relieved; and, issuing from the flame of each lamp, (for there were many,) there flowed unbrokenly into my ears a strain of melodious monotone. And when now, dear Una, approaching the bed upon which I lay outstretched, you sat gently by my side, breathing odor from your sweet lips, and pressing them upon my brow, there arose tremulously within my bosom, and mingling with the merely physical sensations which circumstances had called forth, a something akin to sentiment itself —a feeling that, half appreciating, half responded to your earnest love and sorrow; but this feeling took no root in the pulseless heart, and seemed indeed rather a shadow than a reality, and faded quickly away, first into extreme quiescence, and then into a purely sensual pleasure as before.

And now, from the wreck and the chaos of the usual senses, there appeared to have arisen within me a sixth, all perfect. In its exercise I found a wild delight—yet a delight still physical, inasmuch as the understanding had in it no part. Motion in the animal frame had fully ceased. No muscle quivered; no nerve thrilled; no artery throbbed. But there seemed to have sprung up in the brain, *that* of which no words could convey to the merely human intelligence even an indistinct conception. Let me term it a mental pendulous pulsation. It was the moral embodiment of man's abstract idea of *Time*. By the absolute equalization of this movement—or of such as this—had the cycles of the firmamental orbs themselves, been adjusted. By its aid

I measured the irregularities of the clock upon the mantel, and of the watches of the attendants. Their tickings came sonorously to my ears. The slightest deviations from the true proportion—and these deviations were omni-prævalent—affected me just as violations of abstract truth were wont, on earth, to affect the moral sense. Although no two of the time-pieces in the chamber struck the individual seconds accurately together, yet I had no difficulty in holding steadily in mind the tones, and the respective momentary errors of each. And this—this keen, perfect, self-existing sentiment of *duration*—this sentiment existing (as man could not possibly have conceived it to exist) independently of any succession of events—this idea—this sixth sense, upspringing from the ashes of the rest, was the first obvious and certain step of the intemporal soul upon the threshold of the temporal Eternity.

It was midnight; and you still sat by my side. All others had departed from the chamber of Death. They had deposited me in the coffin. The lamps burned flickeringly; for this I knew by the tremulousness of the monotonous strains. But, suddenly, these strains diminished in distinctness and in volume. Finally they ceased. The perfume in my nostrils died away. Forms affected my vision no longer. The oppression of the Darkness uplifted itself from my bosom. A dull shock like that of electricity pervaded my frame, and was followed by total loss of the idea of contact. All of what man has termed sense was merged in the sole consciousness of entity, and in the one abiding sentiment of duration. The mortal body had been at length stricken with the hand of the deadly *Decay*.

Yet had not all of sentience departed; for the consciousness and the sentiment remaining supplied some of its functions by a lethargic intuition. I appreciated the direful change now in operation upon the flesh, and, as the dreamer is sometimes aware of the bodily presence of one who leans over him, so, sweet Una, I still dully felt that you sat by my side. So, too, when the noon of the second day came, I was not unconscious of those movements which displaced you from my side, which confined me within the coffin, which deposited me within the hearse, which bore me to the grave, which lowered me within it, which heaped heavily the mould upon me, and which thus left me, in blackness and corruption, to my sad and solemn slumbers with the worm.

And here, in the prison-house which has few secrets to disclose, there rolled away days and weeks and months; and the soul watched narrowly each second as it flew, and, without effort, took record of its flight—without effort and without object.

A year passed. The consciousness of *being* had grown hourly more indistinct, and that of mere *locality* had, in great measure, usurped its position. The idea of entity was becoming merged in that of *place*. The narrow space immediately surrounding what had been the body, was now growing to be the body itself. At length, as often happens to the sleeper (by sleep and its world alone is *Death* imaged)—at length, as sometimes happened on Earth to the deep slumberer, when some flitting light half startled him into awaking, yet left him half enveloped in dreams—so to me, in the strict embrace of the *Shadow*, came *that* light which alone might have had power to startle—the light of enduring *Love*. Men toiled at the grave in which I lay darkling. They upthrew the damp earth. Upon my mouldering bones there descended the coffin of Una.

And now again all was void. That nebulous light had been extinguished. That feeble thrill had vibrated itself into quiescence. Many *lustra* had supervened. Dust had returned to dust. The worm had food no more. The sense of being had at length utterly departed, and there reigned in its stead—instead of all things—dominant and perpetual—the autocrats *Place* and *Time*. For *that* which *was not*—for that which had no form—for that which had no thought—for that which had no sentience—for that which was soulless, yet of which matter formed no portion—for all this nothingness, yet for all this immortality, the grave was still a home, and the corrosive hours co-mates.

# THE CONVERSATION OF EIROS AND CHARMION

[Published in *Burton's Gentleman's Magazine*, December, 1839.]

> Πῦρ σοι προσοίσω·
>
> I will bring fire to thee.
>
> *Euripides—Androm:*

EIROS.

WHY do you call me Eiros?

CHARMION.

So henceforward will you always be called. You must forget, too, *my* earthly name, and speak to me as Charmion.

EIROS.

This is indeed no dream!

CHARMION.

Dreams are with us no more;—but of these mysteries anon. I rejoice to see you looking life-like and rational. The film of the shadow has already passed from off your eyes. Be of heart, and fear nothing. Your allotted days of stupor have expired; and, to-morrow, I will myself induct you into the full joys and wonders of your novel existence.

EIROS.

True—I feel no stupor—none at all. The wild sickness and the terrible darkness have left me, and I hear no longer that mad, rushing, horrible sound, like the "voice of many waters." Yet my senses are bewildered, Charmion, with the keenness of their perception of *the new.*

CHARMION.

A few days will remove all this;—but I fully understand you, and feel for you. It is now ten earthly years since I underwent what you undergo—yet the remembrance of it hangs by me still. You have now suffered all of pain, however, which you will suffer in Aidenn.

EIROS.

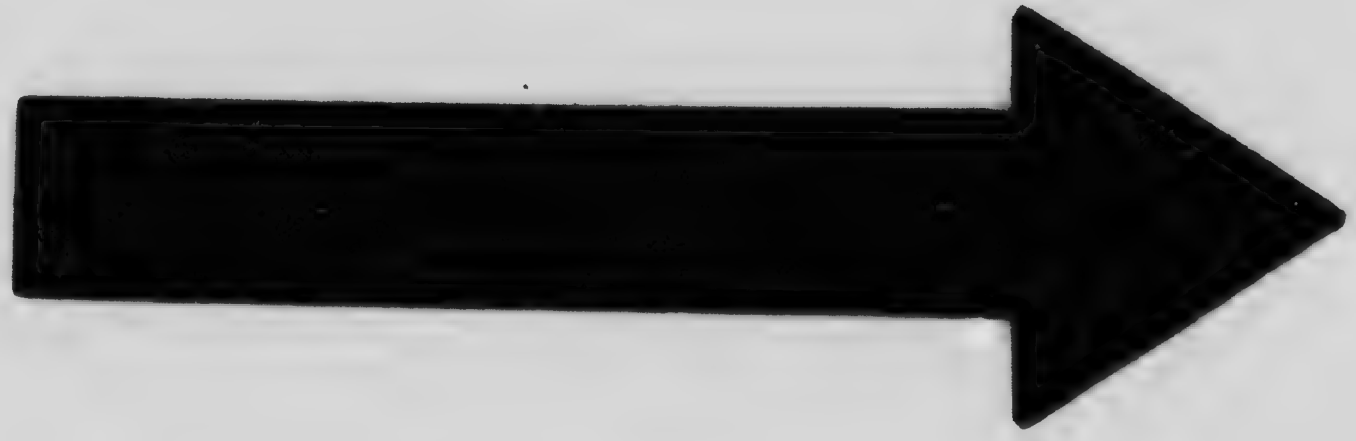
In Aidenn?

CHARMION.

In Aidenn.

EIROS.

Oh God!—pity me, Charmion!—I am overburthened with the majesty of all things—of the unknown now known—of the speculative Future merged in the august and certain Present.



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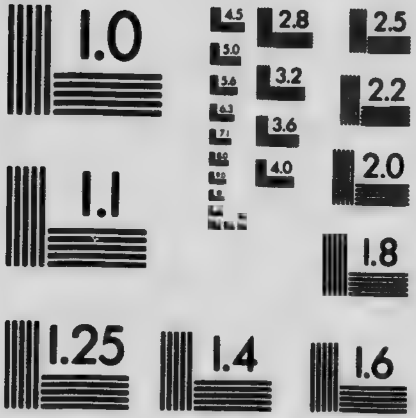

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CHARMION.

Grapple not now with such thoughts. Tomorrow we will speak of this. Your mind wavers, and its agitation will find relief in the exercise of simple memories. Look not around, nor forward—but back. I am burning with anxiety to hear the details of that stupendous event which threw you among us. Tell me of it. Let us converse of familiar things, in the old familiar language of the world which has so fearfully perished.

EIROS.

Most fearfully, fearfully!—this is indeed no dream.

CHARMION.

Dreams are no more. Was I much mourned, my Eiros?

EIROS.

Mourned, Charmion?—oh deeply. To that last hour of all, there hung a cloud of intense gloom and devout sorrow over your household.

CHARMION.

And that last hour—speak of it. Remember that, beyond the naked fact of the catastrophe itself, I know nothing. When, coming out from among mankind, I passed into Night through the Grave—at that period, if I remember aright, the calamity which overwhelmed you was utterly unanticipated. But, indeed, I knew little of the speculative philosophy of the day.

**EIROS.**

The individual calamity was, as you say, entirely unanticipated; but analogous misfortunes had been long a subject of discussion with astronomers. I need scarce tell you, my friend, that, even when you left us, men had agreed to understand those passages in the most holy writings which speak of the final destruction of all things by fire, as having reference to the orb of the earth alone. But in regard to the immediate agency of the ruin, speculation had been at fault from that epoch in astronomical knowledge in which the comets were divested of the terrors of flame. The very moderate density of these bodies had been well established. They had been observed to pass among the satellites of Jupiter, without bringing about any sensible alteration either in the masses or in the orbits of these secondary planets. We had long regarded the wanderers as vapory creations of inconceivable tenuity, and as altogether incapable of doing injury to our substantial globe, even in the event of contact. But contact was not in any degree dreaded; for the elements of all the comets were accurately known. That among *them* we should look for the agency of the threatened fiery destruction had been for many years considered an inadmissible idea. But wonders and wild fancies had been, of late days, strangely rife among mankind; and, although it was only with a few of the ignorant that actual apprehension prevailed, upon the announcement by astronomers of a *new* comet, yet this announcement was generally received with I know not what of agitation and mistrust.

The elements of the strange orb were immediately calculated, and it was at once conceded by all observers, that its path, at perihelion, would bring it into very close proximity with the earth. There were two or three astronomers, of secondary note, who resolutely maintained that a contact was inevitable. I cannot very well express to you the effect of this intelligence upon the people. For a few short days they would not believe an assertion which their intellect, so long employed among worldly considerations, could not in any manner grasp. But the truth of a vitally important fact soon makes its way into the understanding of even the most stolid. Finally, all men saw that astronomical knowledge lied not, and they awaited the comet. Its approach was not, at first, seemingly rapid; nor was its appearance of very unusual character. It was of a dull red, and had little perceptible train. For seven or eight days we saw no material increase in its apparent diameter, and but a partial alteration in its color. Meantime, the ordinary affairs of men were discarded, and all interests absorbed in a growing discussion, instituted by the philosophic, in respect to the cometary nature. Even the grossly ignorant aroused their sluggish capacities to such considerations. The learned *now* gave their intellect—their soul

—to no such points as the allaying of fear, or to the sustenance of loved theory. They sought—they panted for right views. They groaned for perfected knowledge. *Truth* arose in the purity of her strength and exceeding majesty, and the wise bowed down and adored.

That material injury to our globe or to its inhabitants would result from the apprehended contact, was an opinion which hourly lost ground among the wise; and the wise were now freely permitted to rule the reason and the fancy of the crowd. It was demonstrated, that the density of the comet's *nucleus* was far less than that of our rarest gas; and the harmless passage of a similar visitor among the satellites of Jupiter was a point strongly insisted upon, and which served greatly to allay terror. Theologists, with an earnestness fear-enkindled, dwelt upon the biblical prophecies, and expounded them to the people with a directness and simplicity of which no previous instance had been known. That the final destruction of the earth must be brought about by the agency of fire, was urged with a spirit that enforced every where conviction; and that the comets were of no fiery nature (as all men now knew) was a truth which relieved all, in a great measure, from the apprehension of the great calamity foretold. It is noticeable that the popular prejudices and vulgar errors in regard to pestilences and wars—errors which were wont to prevail upon every appearance of a comet—were now altogether unknown. As if by some sudden convulsive exertion, reason had at once hurled superstition from her throne. The feeblest intellect had derived vigor from excessive interest.

What minor evils might arise from the contact were points of elaborate question. The learned spoke of slight geological disturbances, of probable alterations in climate, and consequently in vegetation; of possible magnetic and electric influences. Many held that no visible or perceptible effect would in any manner be produced. While such discussions were going on, their subject gradually approached, growing larger in apparent diameter, and of a more brilliant lustre. Mankind grew paler as it came. All human operations were suspended.

There was an epoch in the course of the general sentiment when the comet had attained, at length, a size surpassing that of any previously recorded visitation. The people now, dismissing any lingering hope that the astronomers were wrong, experienced all the certainty of evil. The chimerical aspect of their terror was gone. The hearts of the stoutest of our race beat violently within their bosoms. A very few days sufficed, however, to merge even such feelings in sentiments more unendurable. We could no longer apply to the strange orb any *accustomed* thoughts. Its *historical* attributes had disappeared. It oppressed us with a hideous *novelty* of emotion. We saw it not as an astronomical phenomenon in the heavens, but as an incubus upon our hearts, and a shadow upon our brains. It had taken, with inconceivable rapidity, the character of a gigantic mantle of rare flame, extending from horizon to horizon.

Yet a day, and men breathed with greater freedom. It was clear that we were already within the influence of the comet; yet we lived. We even felt an unusual elasticity of frame and vivacity of mind. The exceeding tenuity of the object of our dread was apparent; for all heavenly objects were plainly visible through it. Meantime, our vegetation had perceptibly altered; and we gained faith, from this predicted circumstance, in the foresight of the wise. A wild luxuriance of foliage, utterly unknown before, burst out upon every vegetable thing.

Yet another day—and the evil was not altogether upon us. It was now evident that its nucleus would first reach us. A wild change had come over all men; and the first sense of pain was the wild signal for general lamentation and horror. This first sense of pain lay in a rigorous constriction of the breast and lungs, and an insufferable dryness of the skin. It could not be denied that our atmosphere was radically affected; the conformation of this atmosphere and the possible modifications to which it might be subjected, were now the topics of discussion. The result of investigation sent an electric thrill of the intensest terror through the universal heart of man.

It had been long known that the air which encircled us was a compound of oxygen and nitrogen gases, in the proportion of twenty-one measures of oxygen, and seventy-nine of nitrogen, in every one hundred of the atmosphere. Oxygen, which was the principle of combustion, and the vehicle of heat, was absolutely necessary to the support of animal life, and was the most powerful and energetic agent in nature. Nitrogen, on the contrary, was incapable of supporting either animal life or flame. An unnatural excess of oxygen would result, it had been ascertained, in just such an elevation of the animal spirits as we had latterly experienced. It was the pursuit, the extension of the idea, which had engendered awe. What would be the result of *a total extraction of the nitrogen?* A combustion irresistible, all-devouring, omni-prevalent, immediate;—the entire fulfilment, in all their minute and terrible details, of the fiery and horror-inspiring denunciations of the prophecies of the Holy Book.

Why need I paint, Charmion, the now disenchained frenzy of mankind? That tenuity in the comet which had previously inspired us with hope, was now the source of the bitterness of despair. In its impalpable gaseous character we clearly perceived the consummation of Fate. Meantime a day again passed—bearing away with it the last shadow of Hope. We gasped in the rapid modification of the air. The red blood bounded tumultuously through its strict channels. A furious delirium possessed all men; and, with arms rigidly outstretched towards the threatening heavens, they trembled and shrieked aloud. But the nucleus of the destroyer was now upon us;—even here in Aidenn, I shudder while I speak. Let me be brief—brief as the ruin that overwhelmed. For a moment there was a wild lurid light alone, visiting and penetrating all things. Then—let us bow down, Charmion, before the excessive majesty of the great God!—then, there came a shouting and pervading sound, as if from the mouth itself of HIM; while the whole incumbent mass of ether in which we existed, burst at once into a species of intense flame, for whose surpassing brilliancy and all-fervid heat even the angels in the high Heaven of pure knowledge have no name. Thus ended all.

# THE PHILOSOPHY OF FURNITURE

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In the internal decoration, if not in the external architecture of their residences, the English are supreme. The Italians have but little sentiment beyond marbles and colors. In France, *meliora probant, deteriora sequuntur*—the people are too much a race of gad-abouts to maintain those beautiful proprieties of which, indeed, they have a delicate appreciation, or at least the elements of a proper sense. The Chinese and most of the Eastern races have a warm but inappropriate fancy. The Scotch are *poor* decorists. The Dutch have, perhaps, an indeterminate idea that a curtain is not a cabbage. In Spain they are *all* curtains—a nation of hangmen. The Russians do not furnish. The Hottentots and Kickapoos are very well in their way. The Yankees alone are preposterous.

How this happens, it is not difficult to see. We have no aristocracy of blood, and having therefore as a natural, and indeed as an inevitable thing, fashioned for ourselves an aristocracy of dollars, the *display of wealth* has here to take the place and perform the office of the heraldic display in monarchial countries. By a transition readily understood, and which might have been as readily foreseen, we have been brought to merge in simple *show* our notions of taste itself.

To speak less abstractedly. In England, for example, no mere parade of costly appurtenances would be so likely, as with us, to create an impression of the beautiful in respect to the appurtenances themselves—or to taste as regards the proprietor:—this for the reason, first, that wealth is not, in England, the loftiest object of ambition as constituting a nobility; and, secondly, that there, the true nobility of blood, confining itself within the strict limits of legitimate taste, rather avoids than affects that mere costliness in which a *parvenu* rivalry may at any time be successfully attempted. The people *will* imitate the nobles, and the result is a thorough diffusion of the proper feeling. But in America, the coins current being the sole arms of the aristocracy, their display may be said, in general, to be the sole means of aristocratic distinction; and the populace, looking always upward for models, are insensibly led to confound the two entirely separate ideas of magnificence and beauty. In short, the cost of an article of furniture has at length come to be, with us, nearly the sole test of its merit in a decorative point of view—and this test, once established, has led the way to many analogous errors, readily traceable to the one primitive folly.

There could be nothing more directly offensive to the eye of an artist than the interior of what is termed in the United States—that is to say, in Appallachia—a well-furnished apartment. Its most usual defect is a want of keeping. We speak of the keeping of a room as we would of the keeping of a picture—for both the picture and the room are amenable to those undeviating principles which regulate all varieties of art; and very nearly the same laws by which we decide on the higher merits of a painting, suffice for decision on the adjustment of a chamber.

A want of keeping is observable sometimes in the character of the several pieces of furniture, but generally in their colors or modes of adaptation to use. *Very* often the eye is offended by their inartistical arrangement. Straight lines are too prevalent—too uninterruptedly continued—or clumsily interrupted at right angles. If curved lines occur, they are repeated into unpleasant uniformity. By undue precision, the appearance of many a fine apartment is utterly spoiled.

Curtains are rarely well disposed, or well chosen, in respect to other decorations. With formal furniture, curtains are out of place: and an extensive volume of drapery of any kind is, under any circumstances, irreconcilable with good taste—the proper quantum, as well as the proper adjustment, depending upon the character of the general effect.

Carpets are better understood of late than of ancient days, but we still very frequently err in their patterns and colors. The soul of the apartment is the carpet. From it are deduced not only the hues but the forms of all objects incumbent. A judge at common law may be an ordinary man; a good judge of a carpet *must be* a genius. Yet we have heard discoursing of carpets, with the air *"d'un mouton qui rêve,"* fellows who should not and who could not be entrusted with the management of their own *moustaches*. Every one knows that a large floor *may* have a covering of large figures, and that a small one *must* have a covering of small—yet this is not all the knowledge in the world. As regards texture, the Saxony is alone admissible. Brussels is the preter-pluperfect tense of fashion, and Turkey is taste in its dying agonies. Touching pattern—a carpet should *not* be bedizzened out like a Riccaree Indian—all red chalk, yellow ochre, and cock's feathers. In brief—distinct grounds, and vivid circular or cycloid figures, *of no meaning,* are here Median laws. The abomination of flowers, or representations of well-known objects of any kind, should not be endured within the limits of Christendom. Indeed, whether on carpets, or curtains, or tapestry, or ottoman coverings, all upholstery of this nature should be rigidly Arabesque. As for those antique floor-cloths still occasionally seen in the dwellings of the rabble—cloths of huge, sprawling, and radiating devices, stripe-interspersed, and glorious with all hues, among which no ground is intelligible—these are but the wicked invention of a race of time-savers and money-lovers—children of Baal and worshippers of Mammom—Benthams, who, to spare thought and economize fancy, first cruelly invented the Kaleidoscope, and then established joint-stock companies to twirl it by steam.

*Glare* is a leading error in the philosophy of American household decoration—an error easily recognized as deduced from the perversion of taste just specified. We are violently enamored of gas and of glass. The former is totally inadmissible within doors. Its harsh and unsteady light offends. No one having both brains and eyes will use it. A mild, or what artists term a cool, light, with its consequent warm shadows, will do wonders for even an ill-furnished apartment. Never was a more lovely thought than that of the astral lamp. We mean, of course, the astral lamp proper—the lamp of Argand, with its original plain ground-glass shade, and its tempered and uniform moonlight rays. The cut-glass shade is a weak invention of the enemy. The eagerness with which we have adopted it, partly on account of its *flashiness,* but principally on account of its *greater cost,* is a good commentary on the proposition with which we began. It is not too much to say, that the deliberate employer of a cut-glass shade, is either radically deficient in taste, or blindly subservient to the caprices of fashion. The light proceeding from one of these gaudy abominations is unequal, broken, and painful. It alone is sufficient to mar a world of good effect in the furniture subjected to its influence. Female loveliness, in especial, is more than one half disenchanted beneath its evil eye.

In the matter of glass, generally, we proceed upon false principles. Its leading feature is *glitter*—and in that one word how much of all that is detestable do we express! Flickering, unquiet lights, are *sometimes* pleasing—to children and idiots always so—but in the embellishment of a room they should be scrupulously avoided. In truth, even strong *steady* lights are inadmissible. The huge and unmeaning glass chandeliers, prism-cut, gas-lighted, and without shade, which dangle in our most fashionable drawing-rooms, may be cited as the quintessence of all that is false in taste or preposterous in folly.

The rage of *glitter*—because its idea has become, as we before observed, confounded with that of magnificence in the abstract—has led us, also, to the exaggerated employment of mirrors. We line our dwellings with great British plates, and then imagine we have done a fine thing. Now the slightest thought will be sufficient to convince any one who has an eye at all, of the ill effect of numerous looking-glasses, and especially of large ones. Regarded apart from its reflection, the mirror presents a continuous, flat, colorless, unrelieved surface,—a thing always and obviously unpleasant. Considered as a reflector, it is potent in producing a monstrous and odious uniformity; and the evil is here aggravated, not in merely direct proportion with the augmentation of its sources, but in a ratio constantly increasing. In fact, a room with four or five mirrors arranged at random, is, for all purposes of artistic show, a room of no shape at all. If we add to this evil, the attendant glitter upon glitter, we have a perfect farrago of discordant and displeasing effects. The veriest bumpkin, on entering an apartment so bedizzened, would be instantly aware of something wrong, although he might be altogether unable to assign a cause for his dissatisfaction. But let the same person be led into a room tastefully furnished, and he would be startled into an exclamation of pleasure and surprise.

It is an evil growing out of our republican institutions, that here a man of large purse has usually a very little soul which he keeps in it. The corruption of taste is a portion or a pendant of the dollar-manufacture. As we grow rich, our ideas grow rusty. It is, therefore, not among *our* aristocracy that we must look (if at all, in Appallachia) for the spirituality of a British *boudoir*. But we have seen apartments in the tenure of Americans of moderate means, which, in negative merit at least, might vie with any of the *or-molu'd* cabinets of our friends across the water. Even *now,* there is present to our mind's eye a small and not ostentatious chamber with whose decorations no fault can be found. The proprietor lies asleep on a sofa—the weather is cool—the time is near midnight: we will make a sketch of the room during his slumber.

It is oblong—some thirty feet in length and twenty-five in breadth—a shape affording the best (ordinary) opportunities for the adjustment of furniture. It has but one door—by no means a wide one,—which is at one end of the parallelogram, and but two windows, which are at the other. These latter are large, reaching down to the floor—have deep recesses—and open on an Italian *veranda.* Their panes are of a crimson-tinted glass, set in rosewood framings, more massive than usual. They are curtained within the recess, by a thick silver tissue adapted to the shape of the window, and hanging loosely in small volumes. Without the recess are curtains of an exceedingly rich crimson silk, fringed with a deep network of gold, and lined with the silver tissue, which is the material of the exterior blind. There are no cornices; but the folds of the whole fabric (which are sharp rather than massive, and have an airy appearance) issue from beneath a broad entablature of rich giltwork, which encircles the room at the junction of the ceiling and walls. The drapery is thrown open also, or closed by means of a thick rope of gold loosely enveloping it, and resolving itself readily into a knot; no pins or other such devices are apparent. The colors of the curtains and their fringe—the tints of crimson and gold—appear everywhere in profusion, and determine the *character* of the room. The carpet—of Saxony material—is quite half an inch thick, and is of the same crimson ground, relieved simply by the appearance of a gold cord (like that festooning the curtains) slightly relieved about the surface of the *ground,* and thrown upon it in such a manner as to form a succession of short irregular curves—one occasionally overlying the other. The walls are prepared with a glossy paper of a silver-gray tint, spotted with small Arabesque devices of a fainter hue of the prevalent crimson. Many paintings relieve the expanse of the paper. These are chiefly landscapes of an imaginative cast—such as the fairy grottoes of Stanfield, or the lake of the Dismal Swamp of Chapman. There are, nevertheless, three or four female heads, of an ethereal beauty—portraits in the manner of Sully. The tone of each picture is warm, but dark. There are no "brilliant effects." *Repose* speaks in all. Not one is of small size. Diminutive paintings give that *spotty* look to a room, which is the blemish of so many a fine work of Art overtouched. The frames are broad but not deep, and richly carved, without being *dulled* or filagreed. They have the whole lustre of burnished gold. They lie flat on the walls, and do not hang off with cords. The designs themselves are often seen to the better advantage in this latter position, but the general appearance of the chamber is injured. But one mirror—and this is not a very large one—is visible. In shape it is nearly circular—and it is hung so that a reflection of the person can be obtained from it in none of the ordinary sitting-places of the room. Two large low sofas of rosewood and crimson silk, gold-flowered, form the only seats, with the exception of two light conversation chairs, also of rosewood. There is a pianoforte (rosewood, also), without cover, and thrown open. An octagonal table, formed altogether of the richest gold-threaded marble, is placed near one of the sofas. This is also without cover—the drapery of the curtains has been thought sufficient. Four large and gorgeous Sèvres vases, in which bloom a profusion of sweet and vivid flowers, occupy the slightly rounded angles of the room. A tall candelabrum, bearing a small antique lamp with highly perfumed oil, is standing near the head of my sleeping friend. Some light and graceful hanging shelves, with golden edges and crimson silk cords with golden tassels, sustain two or three hundred magnificently bound books. Beyond these things, there is no furniture, if we except an Argand lamp, with a plain crimson-tinted ground-glass shade, which depends from the lofty vaulted ceiling by a single slender gold chain, and throws a tranquil but magical radiance over all.

# VOLUME V—PART II

## ESSAYS—CRITICISM AND MISCELLANY

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# THE RATIONALE OF VERSE

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THE word "Verse" is here used not in its strict or primitive sense, but as the term most convenient for expressing generally and without pedantry all that is involved in the consideration of rhythm, rhyme, metre, and versification.

There is, perhaps no topic in polite literature which has been more pertinaciously discussed, and there is certainly not one about which so much inaccuracy, confusion, misconception, misrepresentation, mystification, and downright ignorance on all sides, can be fairly said to exist. Were the topic really difficult, or did it lie, even, in the cloud-land of metaphysics, where the doubt-vapors may be made to assume any and every shape at the will or at the fancy of the gazer, we should have less reason to wonder at all this contradiction and perplexity; but in fact the subject is exceedingly simple; one tenth of it, possibly, may be called ethical; nine-tenths, however, appertain to the mathematics; and the whole is included within the limits of the commonest common sense.

"But, if this is the case, how," it will be asked, "can so much misunderstanding have arisen? Is it conceivable that a thousand profound scholars, investigating so very simple a matter for centuries, have not been able to place it in the fullest light, at least, of which it is susceptible?" These queries, I confess, are not easily answered:—at all events, a satisfactory reply to them might cost more trouble than would, if properly considered, the whole *vexata quæstio* to which they have reference. Nevertheless, there is little difficulty or danger in suggesting that the "thousand profound scholars" *may* have failed, first, because they were scholars, secondly, because they were profound, and thirdly, because they were a thousand—the impotency of the scholarship and profundity having been thus multiplied a thousand fold. I am serious in these suggestions; for, first again, there is something in "scholarship" which seduces us into blind worship of Bacon's Idol of the Theatre—into irrational deference to antiquity; secondly, the proper "profundity" is rarely profound—it is the nature of Truth in general, as of some ores in particular, to be richest when most superficial; thirdly, the clearest subject may be overclouded by mere superabundance of talk. In chemistry, the best way of separating two bodies is to add a third; in speculation, fact often agrees with fact and argument with argument, until an additional well-meaning fact or argument sets every thing by the ears. In one case out of a hundred a point is excessively discussed because it is obscure; in the ninety-nine remaining it is obscure because excessively discussed. When a topic is thus circumstanced, the readiest mode of investigating it is to forget that any previous investigation has been attempted.

But, in fact, while much has been written on the Greek and Latin rhythms, and even on the Hebrew, little effort has been made at examining that of any of the modern tongues. As regards the English, comparatively nothing has been done. It may be said, indeed, that we are without a treatise on our own verse. In our ordinary grammars and in our works on rhetoric or prosody in general, may be found occasional chapters, it is true, which have the heading, "Versification," but these are, in all instances, exceedingly meagre. They pretend to no analysis; they propose nothing like system; they make no attempt at even rule; every thing depends upon "authority." They are confined, in fact, to mere exemplification of the supposed varieties of English feet and English lines;—although in no work with which I am acquainted are these feet correctly given or these lines detailed in anything like their full extent. Yet what has been mentioned is all—if we except the occasional introduction of some pedagogue-ism, such as this, borrowed from the Greek Prosodies: "When a syllable is wanting, the verse is said to be catalectic; when the measure is exact, the line is acatalectic; when there is a redundant syllable it forms hypermeter." Now whether a line be termed catalectic or acatalectic is, perhaps, a point, of no vital importance;—it is even possible that the student may be able to decide, promptly, when the *a* should be employed and when omitted, yet be incognizant, at the same time, of *all* that is worth knowing in regard to the structure of verse.

A leading defect in each of our treatises, (if treatises they can be called,) is the confining the subject to mere *Versification*, while *Verse* in general, with the understanding given to the term in the heading of this paper, is the real question at issue. Nor am I aware of even one of our Grammars which so much as properly defines the word versification itself. "Versification," says a work now before me, of which the accuracy is far more than usual—the "English Grammar" of Goold Brown—"Versification is the art of arranging words into lines of correspondent length, so as to produce harmony by the regular alternation of syllables differing in quantity." The commencement of this definition might apply, indeed, to the *art* of versification, but not versification itself. Versification is not the art of arranging, &c., but the actual arranging—a distinction too obvious to need comment. The error here is identical with one which has been too long permitted to disgrace the initial page of every one of our school grammars. I allude to the definitions of English Grammar itself. "English Grammar," it is said, "is the art of speaking and writing the English language correctly." This phraseology, or something essentially similar, is employed, I believe, by

Bacon, Miller, Fisk, Greenleaf, Ingersoll, Kirkland, Cooper, Flint, Pue, Comly and many others. These gentlemen, it is presumed, adopted it without examination from Murray, who derived it from Lily, (whose work was "*quam solam Regia Majestas in omnibus scholis docendam præcipit,*") and who appropriated it without acknowledgement, but with some unimportant modification, from the Latin Grammar of Leonicenus. It may be shown, however, that this definition, so complacently received, is not, and cannot be, a proper definition of English Grammar. A definition is that which so describes its object as to distinguish it from all others:—it is no definition of any one thing if its terms are applicable to any other. But if it be asked—"What is the design—the end—the aim of English Grammar?" our obvious answer is, "The art of speaking and writing the English language correctly:"—that is to say, we must use the precise words employed as the definition of English Grammar itself. But the object to be obtained by any means is, assuredly, not the means. English grammar and the end contemplated by English Grammar, are two matters sufficiently distinct; nor can the one be more reasonably regarded as the other than a fishing-hook as a fish. The definition, therefore, which is applicable in the latter instance, *cannot,* in the former, be true. Grammar in general is the analysis of language; English Grammar of the English.

But to return to Versification as defined in our extract above. "It is the art," says the extract, "of arranging words into lines *of corresponding length.*" Not so:—a correspondence in the length of lines is by no means essential. Pindaric odes are, surely, instances of versification, yet these compositions are noted for extreme diversity in the length of their lines.

The arrangement is moreover said to be for the purpose of producing "*harmony* by the regular alternation," &c. But *harmony* is not the sole aim—not even the principal one. In the construction of verse, *melody* should never be left out of view; yet this is a point which all our Prosodies have most unaccountably forborne to touch. Reasoned rules on this topic should form a portion of all systems of rhythm.

"So as to produce harmony," says the definition, "by the *regular alternation,*" &c. A *regular* alternation, as described, forms no part of any principle of versification. The arrangement of spondees and dactyls, for example, in the Greek hexameter, is an arrangement which may be termed *at random.* At least it is arbitrary. Without interference with the line as a whole, a dactyl may be substituted for a spondee, or the converse, at any point other than the ultimate and penultimate feet, of which the former is always a spondee, the latter nearly always a dactyl. Here, it is clear, we have no "*regular* alternation of syllables differing in quantity."

"So as to produce harmony," proceeds the definition, "by the regular alternation of *syllables differing in quantity,*" —in other words by the alternation of long and short syllables; for in rhythm all syllables are necessarily either short or long. But not only do I deny the necessity of any *regularity* in the succession of feet, and, by consequence, of syllables, but dispute the essentiality of any *alternation*, regular or irregular, of syllables long and short. Our author, observe, is now engaged in a definition of versification in general, not of English versification in particular. But the Greek and Latin metres abound in the spondee and pyrrhic—the former consisting of two long syllables; the latter of two short; and there are innumerable instances of the immediate succession of many spondees and many pyrrhics.

Here is a passage from Silius Italicus:

Fallis te mensas inter quod credis inermem
Tot bellis quæsita viro, tot cædibus armat
Majestas æterna ducem: si admoveris ora
Cannas et Trebiam ante oculos Trasymenaque busta,
Et Pauli stare ingentem miraberis umbram.

Making the elisions demanded by the classic Prosodies, we should scan these Hexameters thus:

Fāllīs | tē mēn—sās īn | tēr qūod | crēdĭs ĭn | ērmēm |
Tōt bēl—līs qūæ | sītă vī | rō tōt—cædĭbŭs | ārmāt |
Mājēs | tās æ | tērnă dŭ—cēm s'ād | mōvĕrĭs | ōrā |
Cānnās | ēt Trĕbĭ' | ānt'ŏcŭ | lōs Trăsȳ | mēnăqŭe | būstā
Ēt Pāu | lī stā | r'īngēn | tēm mī | rābĕrĭs | ūmbrām |

It will be seen that, in the first and last of these lines, we have only two short syllables in thirteen, with an uninterrupted succession of no less than *nine* long syllables. But how are we to reconcile all this with a definition of versification which describes it as "the art of arranging words into lines of correspondent length so as to produce harmony by the *regular alternation of syllables differing in quantity?*"

It may be urged, however, that our prosodist's *intention* was to speak of the English metres alone, and that, by omitting all mention of the spondee and pyrrhic, he has virtually avowed their exclusion from our rhythms. A grammarian is never excusable on the ground of good intentions. We demand from him, if from any one, rigorous precision of style. But grant the design. Let us admit that our author, following the example of all authors on English Prosody, has, in defining versification at large, intended a definition merely of the English. All these prosodists, we will say, reject the spondee and pyrrhic. Still all admit the iambus, which consists of a short syllable followed by a long; the trochee, which is the converse of the iambus; the dactyl, formed of one long syllable followed by two short; and the anapæst—two short succeeded by a long. The spondee is improperly rejected, as I shall presently show. The pyrrhic is rightfully dismissed. Its existence in either ancient or modern rhythm is purely chimerical, and the insisting on so perplexing a nonentity as a foot of *two short* syllables, affords, perhaps, the best evidence of the gross irrationality and subservience to authority which characterize our Prosody. In the meantime the acknowledged dactyl and anapæst are enough to sustain my proposition about the "alternation," &c., without reference to feet which are assumed to exist in the Greek and Latin metres alone: for an anapæst and a dactyl may meet in the same line; when of course we shall have an uninterrupted succession of four short syllables. The meeting of these two feet, to be sure, is an accident not contemplated in the definition now discussed; for this definition, in demanding a "regular alternation of syllables differing in quantity," insists on a regular succession of similar *feet*. But here is an example:

**Sīng tŏ mĕ | Isăbēlle.**

This is the opening line of a little ballad now before me, which proceeds in the same rhythm—a peculiarly beautiful one. More than all this:—English lines are often well composed, entirely, of a regular succession of syllables *all of the same quantity:*—the first lines, for instance, of the following quatrain by Arthus C. Coxe:

*March! march! march!*
Making sounds as they tread.
Ho! ho! how they step,
Going down to the dead!

The line italicised is formed of three cæsuras. The cæsura, of which I have much to say hereafter, is rejected by the English Prosodies and grossly misrepresented in the classic. It is a perfect foot—the most important in all verse—and consists of a single *long* syllable; *but the length of this syllable varies.*

It has thus been made evident that there is *not one* point of the definition in question which does not involve an error. And for anything more satisfactory or more intelligible we shall look in vain to any published treatise on the topic.

So general and so total a failure can be referred only to radical misconception. In fact the English Prosodists have blindly followed the pedants. These latter, like *les moutons de Panurge,* have been occupied in incessant tumbling into ditches, for the excellent reason that their leaders have so tumbled before. The Iliad, being taken as a starting point, was made to stand in stead of Nature and common sense. Upon this poem, in place of facts and deduction from fact, or from natural law, were built systems of feet, metres, rhythms, rules,—rules that contradict each other every five minutes, and for nearly all of which there may be found twice as many exceptions as examples. If any one has a fancy to be thoroughly confounded—to see how far the infatuation of what is termed "classical scholarship" can lead a book-worm in the manufacture of darkness out of sunshine, let him turn over, for a few moments, any of the German Greek Prosodies. The only thing clearly made out in them in a very magnificent contempt for Leibnitz's principle of "a sufficient reason."

To divert attention from the real matter in hand by any farther reference to these works, is unnecessary, and would be weak. I cannot call to mind, at this moment, one essential particular of information that is to be gleaned from them; and I will drop them here with merely this one observation: that, employing from among the numerous "*ancient*" feet the spondee, the trochee, the iambus, the anapæst, the dactyl, and the cæsura alone, I will engage to scan *correctly* any of the Horatian rhythms, or any true rhythm that human ingenuity can conceive. And this excess of chimerical feet is, perhaps, the very least of the scholastic supererogations. *Ex uno disce omnia.* The fact is that *Quantity* is a point in whose investigation the lumber of mere learning may be dispensed with, if ever in any. Its appreciation is universal. It appertains to no region, nor race, nor æra in especial. To melody and to harmony the Greeks hearkened with ears precisely similar to those which we employ for similar purposes at present; and I should not be condemned for heresy in asserting that a pendulum at Athens would have vibrated much after the same fashion as does a pendulum in the city of Penn.

*Verse* originates in the human enjoyment of equality, fitness. To this enjoyment, also, all the moods of verse—rhythm, metre, stanza, rhyme, alliteration, the *refrain*, and other analogous effects—are to be referred. As there are some readers who habitually confound rhythm and metre, it may be as well here to say that the former concerns the *character* of feet (that is, the arrangements of syllables), while the latter has to do with the *number* of these feet. Thus by "a dactylic *rhythm*" we express a sequence of dactyls. By "a dactylc hexa*meter*" we imply a line or measure consisting of six of these dactyls.

To return to *equality.* Its idea embraces those of similarity, proportion, identity, repetition, and adaptation or fitness. It might not be very difficult to go even behind the idea of equality, and show both how and why it is that the human nature takes pleasure in it, but such an investigation would, for any purpose now in view, be supererogatory. It is sufficient that the *fact* is undeniable—the fact that man derives enjoyment from his perception of equality. Let us examine a crystal. We are at once interested by the equality between the sides and between the angles of one of its faces: the equality of the sides pleases us; that of the angles doubles the pleasure. On bringing to view a second face in all respects similar to the first, this pleasure seems to be squared; on bringing to view a third it appears to be cubed, and so on. I have no doubt, indeed, that the delight experienced, if measurable, would be found to have exact mathematical relations such as I suggest; that is to say, as far as a certain point, beyond which there would be a decrease in similar relations.

The perception of pleasure in the equality of *sounds* is the principle of *Music.* Unpractised ears can appreciate only simple equalities, such as are found in ballad airs. While comparing one simple sound with another they are too much occupied to be capable of comparing the equality subsisting between these two simple sounds, taken conjointly, and two other similar simple sounds taken conjointly. Practised ears, on the other hand, appreciate both equalities at the same instant—although it is absurd to suppose that both are *heard* at the same instant. One is heard and appreciated from itself: the other is heard by the memory; and the instant glides into and is confounded with the secondary, appreciation. Highly cultivated musical taste in this manner enjoys not only these double equalities, all appreciated at once, but takes pleasurable cognizance, through memory, of equalities the members of which occur at intervals so great that the uncultivated taste loses them altogether. That this latter can properly estimate or decide on the merits of what is called scientific music, is of course impossible. But scientific music has no claim to intrinsic excellence—it is fit for scientific ears alone. In its excess it is the triumph of the *physique* over the *morale* or music. The sentiment is overwhelmed by the sense. On the whole, the advocates of the simpler melody and harmony have infinitely the best of the argument;—although there has been very little of real argument on the subject.

In *verse,* which cannot be better designated than as an inferior or less capable Music, there is, happily, little chance for complexity. Its rigidly simple character not even Science—not even Pedantry can greatly pervert.

The rudiment of verse may, possibly, be found in the *spondee.* The very germ of a thought seeking satisfaction in equality of sound, would result in the construction of words of two syllables, equally accented. In corroboration of this idea we find that spondees most abound in the most ancient tongues. The second step we can easily suppose to be the comparison, that is to say, the collocation, of two spondees—of two words composed each of a spondee. The third step would be the juxta-position of three of these words. By this time the perception of monotone would induce farther consideration: and thus arises what Leigh Hunt so flounders in discussing under the title of "The *Principle* of Variety in Uniformity." Of course there is no principle in the case—nor in maintaining it. The "Uniformity" is the principle:—the "Variety" is but the principle's natural safeguard from self-destruction by excess of self. "Uniformity," besides, is the very worst word that could have been chosen for the expression of the *general* idea at which it aims.

The perception of monotone having given rise to an attempt at its relief, the first thought in this new direction would be that of collating two or more words formed each of two syllables differently accented (that is to say, short and long) but having the same order in each word:—in other terms, of collating two or more iambuses, or two or more trochees. And here let me pause to assert that more pitiable nonsense has been written on the topic of *long* and *short* syllables than on any other subject under the sun. In general, a syllable is long or short, just as it is difficult or easy of enunciation. The *natural* long syllables are those encumbered—the *natural* short syllables are those *un*encumbered, with consonants; all the rest is mere artificiality and jargon. The Latin Prosodies have a rule that "a vowel before two consonants is long." This rule is deduced from "authority"—that is, from the observation that vowels so circumstanced, in the ancient poems, are always in syllables long by the laws of scansion. The philosophy of the rule is untouched, and lies simply in the physical difficulty of giving voice to such syllables—of performing the lingual evolutions necessary for their utterance. Of course, it is not the *vowel* that is long, (although the rule says so) but the syllable of which the vowel is a part. It will be seen that the length of a syllable, depending on the facility or difficulty of its enunciation, must have great variation in various syllables; but for the purposes of verse we suppose a long syllable equal to two short ones:—and the natural deviation from this relativeness we correct in perusal. The most closely our long syllables approach this relation with our short ones, the better, *ceteris paribus,* will be our verse: but if the relation does not exist in itself, we force it by emphasis, which can, of course, make any syllable as long as desired;—or, by an effort we can pronounce with unnatural brevity a syllable that is naturally too long. *Accented* syllables are of course always long—but, where *un*encumbered with consonants, must be classed among the *unnaturally* long. Mere custom has declared that we shall accent them—that is to say, dwell upon them; but no inevitable lingual difficulty forces us to do so. In fine, every long syllable must of its own accord occupy in its utterance, or must be *made* to occupy, precisely the time demanded for two short ones. The only exception to this rule is found in the cæsura—of which more anon.

The success of the experiment with the trochees or iambuses (the one would have suggested the other) must have led to a trial of dactyls or anapæsts—natural dactyls or anapæsts—dactylic or anapæstic *words*. And now some degree of complexity has been attained. There is an appreciation, first, of the equality between the several dactyls, or anapæsts, and, secondly, of that between the long syllable and the two short conjointly. But here it may be said, that step after step would have been taken, in continuation of this routine, until all the feet of the Greek Prosodies became exhausted. Not so:—these remaining feet have no existence except in the brains of the scholiasts. It is needless to imagine men inventing these things, and folly to explain how and why they invented them, until it shall be first shown that they are actually invented. All other "feet" than those which I have specified, are, if not impossible at first view, merely combinations of the specified; and, although this assertion is rigidly true, I will, to avoid misunderstanding, put it in a somewhat different shape. I will say, then, that at present I am aware of no *rhythm*—nor do I believe that any one can be constructed—which, in its last analysis, will not be found to consist altogether of the feet I have mentioned, either existing in their individual and obvious condition, or interwoven with each other in accordance with simple natural laws which I will endeavor to point out hereafter.

We have now gone so far as to suppose men constructing indefinite sequences of spondaic, iambic, trochaic, dactylic, or anapæstic, words. In *extending* these sequences, they would be again arrested by the sense of monotone. A succession of spondees would *immediately* have displeased; one of iambuses or of trochees, on account of the variety included within the foot itself, would have taken longer to displease; one of dactyls or anapæsts, still longer; but even the last, if extended very far, must have become wearisome. The idea, first, of curtailing, and, secondly, of defining the length of, a sequence, would thus at once have arisen. Here then is the *line,* or verse proper.* The principle of equality being constantly at the bottom of the whole process, lines would naturally be made, in the first instance, equal in the number of their feet; in the second instance, there would be variation in the mere number; one line would be twice as long as another; then one would be some less obvious multiple of another; then still less obvious proportions would be adopted:—nevertheless there would be *proportion,* that is say, a phase of equality, still.

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* Verse, from the Latin *vertere,* to turn, is so called on account of the turning or re-commencement of the series of feet. Thus a verse, strictly speaking, is a line. In this sense, however, I have preferred using the latter word alone; employing the former in the general acceptation given it in the heading of this paper.

Lines being once introduced, the necessity of distinctly defining these lines *to the ear,* (as yet written verse does not exist,) would lead to a scrutiny of their capabilities *at their terminations:*— and now would spring up the idea of equality in sound between the final syllables—in other words, of *rhyme.* First, it would be used only in the iambic, anapæstic, and spondaic rhythms, (granting that the latter had not been thrown aside, long since, on account of its tameness;) because in these rhythms, the concluding syllable being long, could best sustain the necessary protraction of the voice. No great while could elapse, however, before the effect, found pleasant as well as useful, would be applied to the two remaining rhythms. But as the chief force of rhyme must lie in the accented syllable, the attempt to create rhyme at all in these two remaining rhythms, the trochaic and dactylic, would necessarily result in double and triple rhymes, such as *beauty* with *duty* (trochaic,) and *beautiful* with *dutiful* (dactylic).

It must be observed, that in suggesting these processes. I assign them no date: nor do I even insist upon their order. Rhyme is supposed to be of modern origin, and were this proved, my positions remain untouched. I may say, however, in passing, that several instances of rhyme occur in the "Clouds" of Aristophanes, and that the Roman poets occasionally employ it. There is an effective species of ancient rhyming which has never descended to the moderns: that in which the ultimate and penultimate syllables rhyme with each other. For example:

> Parturiunt montes et nascitur ridiculus mus.

And again:

> Litoreis ingens inventa sub ilicibus sus.

The terminations of Hebrew verse, (as far as understood,) show no signs of rhyme; but what thinking person can doubt that it did actually exist? That men have so obstinately and blindly insisted, *in general,* even up to the present day, in confining rhyme to the *ends* of lines, when its effect is even better applicable elsewhere, intimates, in my opinion, the sense of some *necessity* in the connexion of the end with the rhyme—hints that the origin of rhyme lay in a necessity which connected it with the end—shows that neither mere accident nor mere fancy gave rise to the connexion—points, in a word, at the very necessity which I have suggested, (that of some mode of defining lines *to the ear,*) as the true origin of rhyme. Admit this, and we throw the origin far back in the night of Time—beyond the origin of written verse.

But, to resume. The amount of complexity I have now supposed to be attained, is very considerable. Various systems of equalization are appreciated at once (or nearly so) in their respective values and in the value of each system with reference to all the others. As our present *ultimatum* of complexity, we have arrived at triple-rhymed, natural-dactylic lines, existing proportionally as well as equally with regard to other triple-rhymed, natural-dactylic lines. For example:

> **Virginal Lilian, rigidly, humblily dutiful;**
> **Saintlily, lowlily,**
> **Thrillingly, holily**
> **Beautiful!**

Here we appreciate, first, the absolute equality between the long syllable of each dactyl and the two short conjointly; secondly, the absolute equality between each dactyl and any other dactyl—in other words, among all the dactyls; thirdly, the absolute equality between the two middle lines; fourthly, the absolute equality between the first line and the three others taken conjointly; fifthly, the absolute equality between the last two syllables of the respective words "dutiful" and "beautiful;" sixthly, the absolute equality between the two last syllables of the respective words "lowlily" and "holily;" seventhly, the proximate equality between the first syllable of "dutiful" and the first syllable of "beautiful;" eighthly, the proximate equality between the first syllable of "lowlily" and that of "holily;" ninthly, the proportional equality (that of five to one,) between the first line and each of its members, the dactyls; tenthly, the proportional equality (that of two to one,) between each of the middle lines and its members, the dactyls; eleventhly, the proportional equality between the first line and each of the two middle—that of five to two; twelfthly, the proportional equality between the first line and the last—that of five to one; thirteenthly, the proportional equality between each of the middle lines and the last—that of two to one; lastly, the proportional equality, as concerns number, between all the lines, taken collectively and any individual line—that of four to one.

The consideration of this last equality would give birth immediately to the idea of *stanza**—that is to say, the insulation of lines into equal or obviously proportional masses. In its primitive (which was also its best) form, the stanza would most probably have had absolute unity. In other words, the removal of any one of its lines would have rendered it imperfect; as in the case above, where, if the last line, for example, be taken away, there is left no rhyme to the "dutiful" of the first. Modern stanza is excessively loose—and where so, ineffective, as a matter of course.

Now, although in the deliberate written statement which I have here given of these various systems of equalities, there seems to be an infinity of complexity—so much that it is hard to conceive the mind taking cognizance of them all in the brief period occupied by the perusal or recital of the stanza—yet the difficulty is in fact apparent only when we will it to become so. Any one fond of mental experiment may satisfy himself, by trial, that, in listening to the lines, he does actually (although with a seeming unconsciousness, on account of the rapid evolutions of sensation,) recognise and instantaneously appreciate (more or less intensely as his ear is cultivated,) each and all of the equalizations detailed. The pleasure received, or receivable, has very much such progressive increase, and in very nearly such mathematical relations, as those which I have suggested in the case of the crystal.

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* A stanza is often vulgarly, and with gross impropriety, called a *verse*.

It will be observed that I speak of merely a proximate equality between the first syllable of "dutiful" and that of "beautiful;" and it may be asked why we cannot imagine the earliest rhymes to have had absolute instead of proximate equality of sound. But absolute equality would have evolved the use of identical words; and it is the duplicate sameness or monotony—that of sense as well as that of sound—which would have caused these rhymes to be rejected in the very first instance.

The narrowness of the limits within which verse composed of natural feet alone, must necessarily have been confined, would have led, after a *very* brief interval, to the trial and immediate adoption of artificial feet—that is to say, of feet *not* constituted each of a single word, but two or even three words; or of parts of words. These feet would be intermingled with natural ones. For example:

Ă brēath | căn māke | thĕm ās | ă brēath | hăs māde

This is an iambic line in which each iambus is formed of two words. Again.

Thĕ ĭm | ĭmă | gĭnă | blĕ might | ŏf Jōve.

This is an iambic line in which the first foot is formed of a word and a part of a word; the second and third, of parts taken from the body or interior of a word; the fourth, of a part and a whole; the fifth, of two complete words. There are no *natural* feet in either lines. Again:

Căn ĭt bĕ | fāncĭĕd thăt | Dēĭty | ēvĕr vĭn | dĭctĭvelȳ̆
Māde ĭn hĭs | īmăge ă | mānnĭkĭn | mērelȳ̆ tŏ | māddĕn ĭt?

These are two dactylic lines in which we find natural feet ("Deity," "mannikin;") feet composed of two words ("fancied that," "image a," "merely to," "madden it;") feet composed of three words ("can it be," "made in his;") a foot composed of a part of a word ("dictively;") and a foot composed of a word and a part of a word ("ever vin.")

And now, in our supposititious progress, we have gone so far as to exhaust all the *essentialities* of verse. What follows may, strictly speaking, be regarded as embellishment merely—but even in this embellishment, the rudimental sense of *equality* would have been the never-ceasing impulse. It would, for example, be simply in seeking farther administration to this sense that men would come, in time, to think of the *refrain*, or burden, where, at the closes of the several stanzas of a poem, one word or phrase is *repeated;* and of alliteration, in whose simplest form a consonant is *repeated* in the commencements of various words. This effect would be extended so as to embrace repetitions both of vowels and of consonants, in the bodies as well as in the beginnings of words; and, at a later period, would be made to infringe on the province of rhyme, by the introduction of general similarity of sound between whole feet occurring in the body of a line:—all of which modifications I have exemplified in the line above,

*M*ade in his i*m*age a *mannikin* *m*erely to *madden it*.

Farther cultivation would improve also the *refrain* by relieving its monotone in slightly varying the phrase at each repetition, or, (as I have attempted to do in "The Raven,") in retaining the phrase and varying its application—although this latter point is not strictly a rhythmical effect *alone*. Finally, poets when fairly wearied with following precedent—following it the more closely the less they perceived it in company with Reason—would adventure so far as to indulge in positive rhyme at other points than the ends of lines. First, they would put it in the middle of the line; then at some point where the multiple would be less obvious; then, alarmed at their own audacity, they would undo all their work by cutting these lines in two. And here is the fruitful source of the infinity of "short metre," by which modern poetry, if not distinguished, is at least disgraced. It would require a high degree, indeed, both of cultivation and of courage, on the part of any versifier, to enable him to place his rhymes—and let them remain—at unquestionably their best position, that of unusual and *unanticipated* intervals.

On account of the stupidity of some people, or, (if talent be a more respectable word,) on account of their talent for misconception—I think it necessary to add here, that I believe the "processes" above detailed to be nearly if not accurately those which *did* occur in the gradual creation of what we now call verse; secondly, that, although I so believe, I yet urge neither the assumed fact nor my belief in it, as a part of the true propositions of this paper; thirdly, that in regard to the aim of this paper, it is of no consequence whether these processes did occur either in the order I have assigned them, or at all; my design being simply, in presenting a general type of what such processes *might* have been and *must* have resembled, to help *them,* the "some people," to an easy understanding of what I have farther to say on the topic of Verse.

There is one point which, in my summary of the processes, I have purposely forborne to touch; because this point, being the most important of all, on account of the immensity of error usually involved in its consideration, would have led me into a series of detail inconsistent with the object of a summary.

Every reader of verse must have observed how seldom it happens that even any one line proceeds uniformly with a succession, such as I have supposed, of absolutely equal feet; that is to say, with a succession of iambuses only, or of trochees only, or of dactyls only, or of anapæsts only, or of spondees only. Even in the most musical lines we find the succession interrupted. The iambic pentameters of Pope, for example, will be found on examination, frequently varied by trochees in the beginning, or by (what seem to be) anapæsts in the body, of the line.

Ŏh thōu | whătē | vĕr tī | tlĕ pleāse | thīne eār |
Dĕan Dră | piĕr Bīck | ĕrstāff | ŏr Gūl | līvĕr
Whēthĕr | thōu choōse | Cĕrvān | tēs' sē | rīoŭs āir |
Ŏr laūgh | ănd shāke | īn Rāb ¦ ĕlaīs' eă | sy̆ chaīr. |

Were any one weak enough to refer to the Prosodies for the solution of the difficulty here, he would find it *solved* as usual by a *rule,* stating the fact, (or what it, the rule, supposes to be the fact,) but without the slightest attempt at the *rationale.* "By a *synœresis* of the two short syllables," say the books, "an anapæst may sometimes be employed for an iambus, or a dactyl for a trochee. . . . In the beginning of a line a trochee is often used for an iambus."

*Blending* is the plain English for *synœresis*—but there should be *no* blending; neither is an anapæst *ever* employed for an iambus, or a dactyl for a trochee. These feet differ in time; and *no* feet so differing can ever be legitimately used in the same line. An anapæst is equal to four short syllables—an iambus only to three. Dactyls and trochees hold the same relation. The principle of *equality*, in verse, admits, it is true, of variation at certain points, for the relief of monotone, as I have already shown, but the point of *time* is that point which, being the rudimental one, must never be tampered with at all.

To explain:—In farther efforts for the relief of monotone than those to which I have alluded in the summary, men soon came to see that there was no absolute necessity for adhering to the precise number of syllables, provided the time required for the whole foot was preserved inviolate. They saw, for instance, that in such a line as

> **Ŏr lāugh | ănd shāke | ĭn Rāb | ĕlais' ĕa | sȳ chāir, |**

the equalization of the three syllables *elais ea* with the two syllables composing any of the other feet, could be readily effected by pronouncing the two syllables *elais* in double quick time. By pronouncing each of the sylables *e* and *lais* twice as rapidly as the syllable *sy*, or the syllable *in*, or any other short syllable, they could bring the two of them, taken together, to the length, that is to say to the time, of any one short syllable. This consideration enabled them to affect the agreeable variation of three syllables in place of the uniform two. And variation was the object —variation to the ear. What sense is there, then, in supposing the object rendered null by the *blending* of the two syllables so as to render them, in absolute effect, one? Of course, there must be *no* blending. Each syllable must be pronounced as distinctly as possible, (or the variation is lost,) but with twice the rapidity in which the ordinary short syllable is enunciated. That the syllables *elais ea* do not compose an *anapæst* is evident and the signs (ăăā) of their accentuation are erroneous. The foot might be written thus (a̯a̯a̱) the inverted crescents expressing double quick time; and might be called a bastard iambus.

Here is a trochaic line:

Sēe thĕ dēlicăte | fōotĕd | rēin-deĕr. |

The prosodies—that is to say the most considerate of them—would here decide that "*delicate*" is a dactyl used in place of a trochee, and would refer to what they call their "rule," for justification. Others, varying the stupidity, would insist upon a Procrustean adjustment thus (del'cate)—an adjustment recommended to all such words as *silvery, murmuring,* etc., which, it is said, should be not only pronounced, but written *silv'ry, murm'ring,* and so on, whenever they find themselves in trochaic predicament. I have only to say that "delicate," when circumstanced as above, is neither a dactyl nor a dactyl's equivalent; that I would suggest for it this (a̱a̯a̯= inverted) accentuation; that I think it as well to call it a bastard trochee; and that all words, at all events, should be written and pronounced *in full,* and as nearly as possible as nature intended them.

About eleven years ago, there appeared in "The American Monthly Magazine," (then edited, I believe, by Mess. Hoffman and Benjamin,) a review of Mr. Willis' Poems; the critic putting forth his strength, or his weakness, in an endeavor to show that the poet was either absurdly affected, or grossly ignorant of the laws of verse; the accusation being based altogether on the fact that Mr. W. made occasional use of this very word "delicate," and other similar words, in "the Heroic measure which every one knew consisted of feet of two syllables." Mr. W. has often, for example, such lines as

> That binds him to woman's *delicate* love—
> In the gay sunshine, *reverent in the storm*—
> With its *invisible* fingers my loose hair.

Here, of course, the feet *licate love, verent in,* and *sible fin,* are bastard iambuses; are *not* anapæsts; and are *not* improperly used. Their employment, on the contrary, by Mr. Willis, is but one of the innumerable instances he has given of keen sensibility in all those matters of taste which may be classed under the general head of *fanciful embellishment.*

It is also about eleven years ago, if I am not mistaken, since Mr. Horne, (of England,) the author of "Orion," one of the noblest epics in any language, thought it necessary to preface his "Chaucer Modernized" by a very long and evidently a very elaborate essay, of which the greater portion was occupied in a discussion of the seemingly anomalous foot of which we have been speaking. Mr. Horne upholds Chaucer in its frequent use; maintains his superiority, *on account* of his so frequently using it, over all English versifiers; and, indignantly repelling the common idea of those who make verse on their fingers—that the superfluous syllable is a roughness and an error—very chivalrously makes battle for it as "a grace." That a grace it *is*, there can be no doubt; and what I complain of is, that the author of the most happily versified long poem in existence, should have been under the necessity of discussing this grace merely *as* a grace, through forty or fifty vague pages, solely because of his inability to show *how* and *why* it is a grace—by which showing the question would have been settled in an instant.

About the trochee used for an iambus, as we see in the beginning of the line,

> Whēthĕr thou choose Cervantes' serious air,

there is little that need be said. It brings me to the general proposition that, in all rhythms, the prevalent or distinctive feet may be varied at will, and nearly at random, by the *occasional* introduction of equivalent feet—that is to say, feet the sum of whose syllabic times is equal to the sum of the syllabic times of the distinctive feet. Thus the trochee, *whēthĕr*, is equal, in the sum of the times of its syllables, to the iambus, *thoŭ choōse*, in the sum of the times of *its* syllables; each foot being, in time, equal to three short syllables. Good versifiers who happen to be, also, good poets, contrive to relieve the monotone of a series of feet, by the use of equivalent feet only at rare intervals, and at such points of their subject as seem in accordance with the *startling* character of the variation. Nothing of this care is seen in the line quoted above—although Pope has some fine instances of the duplicate effect. Where vehemence is to be strongly expressed, I am not sure that we should be wrong in venturing on *two consecutive* equivalent feet—although I cannot say that I have ever known the adventure made, except in the following passage, which occurs in "Al Aaraaf," a boyish poem, written by myself when a boy. I am referring to the sudden and rapid advent of a star.

> Dim was its little disk, and angel eyes
> Alone could see the phantom in the skies
> Whĕn first thĕ phăntŏm's cŏurse wăs fŏund tŏ bĕ
> *Hĕadlŏng hithĕr*ward o'er the starry sea.

In the "general proposition" above, I speak of the *occasional* introduction of equivalent feet. It sometimes happens that unskilful versifiers, without knowing what they do, or why they do it, introduce so many "variations" as to exceed in number the "distinctive" feet; when the ear becomes at once balked by the *bouleversement* of the rhythm. Too many trochees, for example, inserted in an iambic rhythm, would convert the latter to a trochaic. I may note here, that, in all cases, the rhythm designed should be commenced and continued, *without* variation, until the ear has had full time to comprehend what is the rhythm. In violation of a rule so obviously founded in common sense, many even of our best poets, do not scruple to begin an iambic rhythm with a trochee, or the converse; or a dactylic with an anapæst, or the converse; and so on.

A somewhat less objectionable error, although still a decided one, is that of commencing a rhythm, not with a different equivalent foot, but with a "bastard" foot of the rhythm intended. For example:

Mâny ă | thoûght wĭll | cōme tŏ | mêmŏry. |

Here *many a* is what I have explained to be a bastard trochee, and to be understood should be accented with inverted crescents. It is objectionable solely on account of its position as the *opening* foot of a trochaic rhythm. *Memory*, similarly accented, is also a bastard trochee, but *un*objectionable, although by no means demanded.

The farther illustration of this point will enable me to take an important step.

One of our finest poets, Mr. Christopher Pease Cranch, begins a very beautiful poem thus:

Many are the thoughts that come to me
  In my lonely musing;
And they drift so strange and swift
  There's no time for choosing
Which to follow; for to leave
  Any, seems a losing.

"A losing" to Mr. Cranch, of course—but this *en passant*. It will be seen here that the intention is trochaic—although we do *not* see this intention by the opening foot, as we should do—or even by the opening line. Reading the whole stanza, however, we perceive the trochaic rhythm as the general design, and so, after some reflection, we divide the first line thus:

> Many are the | thŏughts thăt | cōme tŏ | mē. |

Thus scanned, the line will seem musical. It *is*—highly so. And it is because there is no end to instances of just such lines of apparently incomprehensible music, that Coleridge thought proper to invent his nonsensical *system* of what he calls "scanning by accents"—as if "scanning by accents" were anything more than a phrase. Whenever "Christabel" is really *not rough*, it can be as readily scanned by the true *laws* (not the supposititious *rules*) of verse, as can the simplest pentameter of Pope; and where it *is* rough (*passim*) these same laws will enable any one of common sense to show *why* it is rough and to point out, instantaneously, the remedy for the roughness.

*A* reads and re-reads a certain line, and pronounces it false in rhythm—unmusical. *B*, however, reads it *to A*, and *A* is at once struck with the perfection of the rhythm, and wonders at his dulness in not "catching" it before. Henceforward he admits the line to be musical. *B*, triumphant, asserts that, to be sure, the line is musical—for it is the work of Coleridge—and that it is *A* who is *not*; the fault being in *A's* false reading. Now here *A* is right and *B* wrong.

*That* rhythm is erroneous, (at some point or other more or less obvious,) which *any* ordinary reader *can*, without design, read improperly. It is the business of the poet so to construct his line that the intention *must* be caught *at once*. Even when these men have precisely the same understanding of a sentence, they differ and often widely, in their modes of enunciating it. Any one who has taken the trouble to examine the topic of emphasis, (by which I here mean not *accent* of particular syllables, but the dwelling on entire words,) must have seen that men emphasize in the most singularly arbitrary manner. There are certain large classes of people, for example, who persist in emphasizing their monosyllables. Little uniformity of emphasis prevails; because the thing itself—the idea, emphasis—is referable to no natural—at least, to no well comprehended and therefore uniform law. Beyond a very narrow and vague limit, the whole matter is conventionality. And if we differ in emphasis even when we agree in comprehension, how much more so in the former when in the latter too! Apart, however, from the consideration of natural disagreement, is it not clear that, by tripping here and mouthing there, any sequence of words may be twisted into any species of rhythm? But are we thence to deduce that all sequences of words are rhythmical in a rational understanding of the term?—for this is the deduction, precisely to which the *reductio ad absurdum* will, in the end, bring all the propositions of Coleridge. Out of a hundred readers of

"Christabel," fifty will be able to make nothing of its rhythm, while forty-nine of the remaining fifty will, with some ado, fancy they comprehend it, after the fourth or fifth perusal. The one out of the whole hundred who shall both comprehend and admire it at first sight—must be an unaccountably clever person—and I am by far too modest to assume, for a moment, that that very clever person is myself.

An illustration of what is here advanced I cannot do better than quote a poem:

Pease porridge hot—pease porridge cold—
Pease porridge in the pot—nine days old.

Now those of my readers who have never *heard* this poem pronounced according to the nursery conventionality, will find its rhythm as obscure as an explanatory note; while those who *have* heard it, will divide it thus, declare it musical, and wonder how there can be any doubt about it.

Pease | porridge | hot | pease | porridge | cold |
Pease | porridge | in the | pot | nine | days | old. |

The chief thing in the way of this species of rhythm, is the necessity which it imposes upon the poet of travelling in constant company with his compositions, so as to be ready at a moment's notice, to avail himself of a well understood poetical license—that of reading aloud one's own doggerel.

In Mr. Cranch's line,

Many are the | thoughts that | come to | me, |

the general error of which I speak is, of course, very partially exemplified, and the purpose for which, chiefly, I cite it, lies yet further on in our topic.

The two divisions (*thoughts that*) and (*come to*) are ordinary trochees. Of the last division (*me*) we will talk hereafter. The first division (many are the) would be thus accented by the Greek Prosodies (māny̆ ăre thĕ) and would be called by them ἀστρόλογος. The Latin books would style the foot *Pæon Primus,* and both Greek and Latin would swear that it was composed of a trochee and what they term a pyrrhic—that is to say, a foot of two *short* syllables—a thing that *cannot be,* as I shall presently show.

But now, there is an obvious difficulty. The *astrologos,* according to the Prosodies' own showing, is equal to *five* short syllables, and the trochee to *three*—yet, in the line quoted, these two feet are equal. They occupy *precisely* the same time. In fact, the whole music of the line depends upon their being *made* to occupy the same time. The Prosodies then, have demonstrated what all mathematicians have stupidly failed in demonstrating—that three and five are one and the same thing.

After what I have already said, however, about the bastard trochee and the bastard iambus, no one can have any trouble in understanding that *many are the* is of similar character. It is merely a bolder variation than usual from the routine of trochees, and introduces to the bastard trochee one additional syllable. But this syllable is not *short*. That is, it is not short in the sense of "*short*" as applied to the final syllable of the ordinary trochee, where the word means merely *the half of long*.

In this case, (that of the additional syllable) "short," if used at all, must be used in the sense of *the sixth of long*. And all the three final syllables can be called *short* only with the same understanding of the term. The three together are equal only to the one short syllable (whose place they supply) of the ordinary trochee. It follows that there is no sense in thus (⌣) accenting these syllables. We must devise for them some new character which shall denote the sixth of long. Let it be ( ( )—the crescent placed with the curve to the left. The whole foot (māny̆ ăre thĕ) might be called a *quick trochee*.

We come now to the final division (*me*) of Mr. Cranch's line. It is clear that this foot, short as it appears, is fully equal in time to each of the preceding. It is in fact the cæsura—the foot which, in the beginning of this paper, I called the most important in all verse. Its chief office is that of pause or termination; and here—at the end of a line—its use is easy, because there is no danger of misapprehending its value. We pause on it, by a seeming necessity, just so long as it has taken us to pronounce the preceding feet, whether iambusses, trochees, dactyls, or anapæsts. It is thus a *variable foot*, and, with some care, may be well introduced into the body of a line, as in a little poem of great beauty by Mrs. Welby:

**I have | a lit | tle step | $\widetilde{\text{son}}$ | of on | ly three | years old. |**

Here we dwell on the cæsura, *son*, just as long as it requires us to pronounce either of the preceding or succeeding iambusses. Its value, therefore, in this line, is that of three short syllables. In the following dactylic line its value is that of four short syllables.

**Pale as a | lily was | Emily $\widetilde{\text{Gray}}$.**

I have accented the cæsura with a (~) by way of expressing this variability of value.

I observed, just now that there could be no such foot as one of two short syllables. What we start from in the very beginning of all idea on the topic of verse, is quantity, *length*. Thus when we enunciate an independent syllable it is long, as a matter of course. If we enunciate two, dwelling on both equally, we express equality in the enumeration of length, and have a right to call them two long syllables. If we dwell on one more than the other, we have also a right to call one short, because it is short in relation to the other. But if we dwell on both equally and with a tripping voice, saying to ourselves here are two short syllables, the query might well be asked of us—"in relation to what are they short?" Shortness is but the negation of length. To say, then, that two syllables, placed independently of any other syllable, are short, is merely to say that they have no positive length, or enunciation—in other words that they are no syllables—that they do not exist at all. And if, persisting, we add anything about their equality, we are merely floundering in the idea of an identical equation, where, $x$ being equal to $x$, nothing is shown to be equal to zero. In a word, we can form no conception of a pyrrhic as of an independent foot. It is a mere chimera bred in the mad fancy of a pedant.

From what I have said about the equalization of the several feet of a *line,* it must not be deduced that any *necessity* for equality in time exists between the rhythm of *several* lines. A poem, or even a stanza, may begin with iambusses, in the first line, and proceed with anapæsts in the second, or even with the less accordant dactyls, as in the opening of quite a pretty specimen of verse by Miss Mary A. S. Aldrich:

> The wa | ter li | ly sleeps | in pride |
> Dŏwn ĭn thĕ dēpths ŏf thĕ | āzūre | lāke. |

Here *azure* is a spondee, equivalent to a dactyl; *lake* a cæsura.

I shall now best proceed in quoting the initial lines of Byron's "Bride of Abydos:"

> Know ye the land where the cypress and myrtle
> Are emblems of deeds that are done in their clime—
> Where the rage of the vulture, the love of the turtle
> Now melt into softness, now madden to crime?
> Know ye the land of the cedar and vine.
> Where the flowers ever blossom, the beams ever shine,
> And the light wings of Zephyr, oppressed with perfume,
> Wax faint o'er the gardens of Gul in their bloom?
> Where the citron and olive are fairest of fruit
> And the voice of the nightingale never is mute—
>
> * * * * * * * * *
>
> Where the virgins are soft as the roses they twine,
> And all save the spirit of man is divine?

'Tis the land of the East—'tis the clime of the Sun—
Can he smile on such deeds as his children have done;
Oh, wild as the accents of lovers' farewell
Are the hearts that they bear and the tales that they tell.

Now the flow of these lines, (as times go,) is very sweet and musical. They have been often admired, and justly—as times go—that is to say, it is a rare thing to find better versification of its kind. And where verse is pleasant to the ear, it is silly to find fault with it because it refuses to be scanned. Yet I have heard men, professing to be scholars, who made no scruple of abusing these lines of Byron's on the ground that they were musical in spite of *all law*. Other gentlemen, *not* scholars, abused "all law" for the same reason:—and it occurred neither to the one party nor to the other that the law about which they were disputing might possibly be no law at all—an ass of a law in the skin of a lion.

The Grammars said something about dactylic lines, and it was easily seen that *these* lines were at least meant for dactylic. The first one was, therefore, thus divided:

Knōw yĕ thĕ | lānd whĕre thĕ | cȳprĕss ănd | mȳrtlĕ. |

The concluding foot was a mystery; but the Prosodies said something about the dactylic "measure" calling now and then for a double rhyme; and the court of inquiry were content to rest in the double rhyme, without exactly perceiving what a double rhyme had to do with the question of an irregular foot. Quitting the first line, the second was thus scanned:

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* Poe's quotation.—EDITOR.

Āre ĕmblĕms | ōf deĕds thăt | āre dōne ĭn | thēir clīme. |

It was immediately seen, however, that *this* would not do:—it was at war with the whole emphasis of the reading. It could not be supposed that Byron, or any one in his senses, intended to place stress upon such monosyllables as "are," "of," and "their," nor could "their clime," collated with "to crime," in the corresponding line below, be fairly twisted into anything like a "double rhyme," so as to bring everything within the category of the Grammars. But farther these Grammars spoke not. The inquirers, therefore, in spite of their sense of harmony in the lines, when considered without reference to scansion, fell back upon the idea that the "Are" was a blunder—an excess for which the poet should be sent to Coventry—and, striking it out, they scanned the remainder of the line as follows:

——ēmblĕms ŏf | deēds thăt ăre | dōne ĭn thĕir clīme. |

This answered pretty well; but the Grammars admitted no such foot as a foot of one syllable; and besides the rhythm was dactylic. In despair, the books are well searched, however, and at last the investigators are gratified by a full solution of the riddle in the profound "Observation" quoted in the beginning of this article:—"When a syllable is wanting, the verse is said to be catalectic; when the measure is exact, the line is acatalectic; when there is a redundant syllable it forms hypermeter." This is enough. The anomalous line is pronounced to be catalectic at the head and to form hypermeter at the tail:—and so on, and so on; it being soon discovered that nearly all the remaining lines are in a similar predicament, and that what flows so smoothly to the ear, although so roughly to the eye, is, after all, a mere jumble of catalecticism, acatalecticism, and hypermeter—not to say worse.

Now, had this court of inquiry been in possession of even the shadow of the *philosophy* of Verse, they would have had no trouble in reconciling this oil and water of the eye and ear, by merely scanning the passage without reference to lines, and, continuously, thus:

Know ye the | land where the | cypress and | myrtle
Are | emblems of | deeds that are | done in their | clime
Where the | rage of the | vulture the | love of the |
turtle Now | melt into | softness now | madden to |
*crime* | Know ye the | land of the | cedar and | vine
Where the | flowers ever | blossom the | beams ever |
shine Where the | light wings of | Zephyr op | pressed
by per | *fume Wax* | faint o'er the | gardens of | Gul in
their | bloom Where the | citron and | olive are | fairest
of | fruit And the | voice of the | nightingale | never is
| mute Where the | virgins are | soft as the | roses they
| *twine And* | all save the | spirit of | man is di | vine
'Tis the | land of the | East 'tis the | clime of the | Sun
Can he | smile on such | deeds as his | children have |
*done Oh* | wild as the | accents of | lovers' fare | well
Are the | hearts that they | bear and the | tales that
they | *tell.*

Here "crime" and "tell" (italicised) are cæsuras, each having the value of a dactyl, four short syllables; while "fume wax," "twine and," and "done Oh," are spondees which, of course, being composed of two long syllables, are also equal to four short, and are the dactyl's natural equivalent. The nicety of Byron's ear has led him into a succession of feet which, with two trivial exceptions as regards the melody, are absolutely accurate—a very rare occurrence this in dactylic or anapæstic rhythms. The exceptions are found in the spondee *"twine And,"* and the dactyl, *"smile on such."* Both feet are false in point of melody. In *"twine And,"* to make out rhythm, we must force *"And"* into a length which it will not naturally bear. We are called on to sacrifice either the proper length of the syllable as demanded by its position as a member of a spondee, or the customary accentuation of the word in conversation. There is no hesitation, and should be none. We at once give up the sound for the sense; and the rhythm is imperfect. In this instance it is *very* slightly so;—not one person in ten thousand could, by ear, detect the inaccuracy. But the *perfection* of verse, as regards melody, consists in its *never* demanding any such sacrifice as is here demanded. The rhythmical must agree, *thoroughly,* with the reading, flow. This perfection has in no instance been attained—but is unquestionably attainable. *"Smile on such,"* the dactyl, is incorrect, because *"such,"* from the character of the two consonants *ch*, cannot *easily* be enunciated in the ordinary time of a short syllable, which its position declares that it is. Almost every reader will be able to appreciate the slight difficulty here; and yet the error is by no means so important as that of the "*And*" in the spondee. By dexterity we *may* pronounce "*such*" in the true time; but the attempt to remedy the rhythmical deficiency of the *And* by drawing it out, merely aggravates the offence against natural enunciation, by directing attention to the offence.

My main object, however, in quoting these lines, is to show that, in spite of the Prosodies, the length of a line is entirely an arbitrary matter. We might divide the commencement of Byron's poem thus:

Know ye the | land where the. |

or thus:

Know ye the | land where the | cypress and. |

or thus:

Know ye the | land where the | cypress and | myrtle are. |

or thus:

Know ye the | land where the | cypress and | myrtle are | emblems of. |

In short, we may give it any division we please, and the lines will be good—provided we have at least *two* feet in a line. As in mathematics two units are required to form number, so rhythm, (from the Greek ἀριθμος, number,) demands for its formation at least two feet. Beyond doubt, we often see such lines as

> Know ye the—
> Land where the—

lines of one foot; and our Prosodies admit such; but with impropriety; for common sense would dictate that every so obvious division of a poem as is made by a line, should include within itself all that is necessary for its own comprehension; but in a line of one foot we can have no appreciation of *rhythm*, which depends upon the equality between *two* or more pulsations. The false lines, consisting sometimes of a single cæsuras, which are seen in mock Pindaric odes, are of course "rhythmical" only in connection with some other line; and it is this want of independent rhythm which adapts them to the purposes of burlesque alone. Their effect is that of incongruity (the principle of mirth;) for they include the blankness of prose amid the harmony of verse.

My second object in quoting Byron's lines, was that of showing how absurd it often is to cite a single line from amid the body of a poem, for the purpose of instancing the perfection or imperfection of the line's rhythm. Were we to see by itself

> Know ye the land where the cypress and myrtle,

we might justly condemn it as defective in the final foot, which is equal to only three, instead of being equal to four, short syllables.

In the foot (*flowers ever*) we shall find a further exemplification of the principle of the bastard iambus, bastard trochee and quick trochee, as I have been at some pains in describing these feet above. All the Prosodies on English verse would insist upon making an elision in "flowers," thus (flow'rs,) but this is nonsense. In the quick trochee (māny̆ ăre thĕ) occurring in Mr. Cranch's *trochaic* line, we had to equalize the time of the three syllables (*ny, are, the,*) to that of the one *short* syllable whose position they usurp. Accordingly each of these syllables is equal to the third of a short syllable, that is to say, the *sixth of a long.* But in Byron's *dactylic* rhythm, we have to equalize the time of the three syllables (*ers, ev, er,*) to that of the one *long* syllable whose position they usurp, or (which is the same thing,) of the *two short.* Therefore the value of each of the syllables (*ers, ev,* and *er*) is the *third of a long.* We enunciate them with only half the rapidity we employ in enunciating the three final syllables of the quick trochee—which latter is a rare foot. The "*flowers ever,*" on the contrary, is as common in the dactylic rhythm as is the *bastard* trochee in the trochaic, or the bastard iambus in the iambic. We may as well accent it with the curve of the crescent to the right, and call it a *bastard dactyl.* A *bastard anapæst,* whose nature I now need be at no trouble in explaining, will of course occur, now and then, in an anapæstic rhythm.

In order to avoid any chance of that confusion which is apt to be introduced in an essay of this kind by too sudden and radical an alteration of the conventionalities to which the reader has been accustomed, I have thought it right to suggest for the accent marks of the bastard trochee, bastard iambus, etc., etc., certain characters which, in merely varying the direction of the ordinary short accent (⌣) should imply, what is the fact, that the feet themselves are not *new* feet, in any proper sense, but simply modifications of the feet, respectively, from which they derive their names. Thus a bastard iambus is, in its essentiality, that is to say, in its time, an iambus. The variation lies only in the *distribution* of this time. The time, for example, occupied by the one short (or *half of long*) syllable, in the ordinary iambus, is, in the bastard, spread equally over two syllables, which are accordingly the *fourth of long.*

But this fact—the fact of the essentiality, or whole time, of the foot being unchanged, is now so fully before the reader, that I may venture to propose, finally, an accentuation which shall answer the real purpose—that is to say, what should be the real purpose of all accentuation—the purpose of expressing to the eye the exact relative value of every syllable employed in Verse.

I have already shown that enunciation, or *length,* is the point from which we start. In other words, we begin with a *long syllable.* This then is our unit; and there will be no need of accenting it at all. An unaccented syllable, in a system of accentuation, is to be regarded always as a long syllable. Thus a spondee would be without accent. In an iambus, the first syllable being "short," or the *half* of long, should be accented with a small 2, placed *beneath* the syllable; the last syllable, being long, should be unaccented;—the whole would be thus ($\underset{2}{\text{con}}\text{trol}$). In a trochee, these accents would be merely conversed, thus ($\text{man}\underset{2}{\text{ly}}$). In a dactyl, each of the two final syllables, being the half of long, should, also, be accented with a small 2 beneath the syllable; and, the first syllable left unaccented, the whole would be thus ($\text{hap}\underset{2}{\text{pi}}\underset{2}{\text{ness}}$). In an anapæst we should converse the dactyl thus, ($\underset{2}{\text{in}}$ $\underset{2}{\text{the}}$ land). In the bastard dactyl, each of the three concluding syllables being the *third* of long, should be accented with a small 3 beneath the syllable and the whole foot would stand thus, ($\text{flow}\underset{3}{\text{ers}}$ $\underset{3}{\text{e}}\underset{3}{\text{ver}}$). In the bastard anapæst we should converse the bastard dactyl thus, ($\underset{3}{\text{in}}$ $\underset{3}{\text{the}}$ $\underset{3}{\text{re}}\text{bound}$). In the bastard iambus, each of the two initial syllables, being the fourth of long, should be accented, below with a small 4; the whole foot would be thus, ($\underset{4}{\text{in}}$ $\underset{4}{\text{the}}$ rain). In the bastard trochee, we should converse the bastard iambus thus, (man$\underset{6}{\text{y}}$ $\underset{6}{\text{a}}$). In the quick trochee, each of the three concluding syllables, being the *sixth* of long, should be accented, below, with a small 6; the whole foot would be thus, (man$\underset{6}{\text{y}}$ $\underset{6}{\text{a}}$re th$\underset{6}{\text{e}}$). The quick iambus is not yet created, and most probably never will be; for it will be excessively useless, awkward, and liable to misconception—as I have already shown that even the quick trochee is:—but, should it appear, we must accent it by conversing the quick trochee. The cæsura, being variable in length, but always *longer than "long,"* should be accented, *above,* with a number expressing the length, or value, of the distinctive foot of the rhythm in which it occurs. Thus a cæsura, occurring in a spondaic rhythm, would be accented with a small 2 above the syllable, or, rather, foot. Occurring in a dactylic or anapæstic rhythm, we also accent it with the 2, above the foot. Occurring in an iambic rhythm, however, it must be accented, above, with 1½; for this is the relative value of the iambus. Occurring in the trochaic rhythm, we give it, of course, the same accentuation. For the complex 1½, however, it would be advisable to substitute the simpler expression $\frac{3}{2}$ which amounts to the same thing.

In this system of accentuation Mr. Cranch's lines, quoted above, would thus be written:

Many are the | thoughts that | come to | me
In my | lonely | musing |

And they | drift so | strange and | swift
There's no | time for | choosing

Which to | follow | for to | leave
Any | seems a | losing. |

In the ordinary system the accentuation would be thus:

Mãny arĕ thĕ | thŏughts thăt | cŏme tŏ | mĕ
In my̆ | lōnely̆ | mūsing. |
Ănd thĕy | drift sŏ | strănge ănd | swift !
Thēre's nŏ | time fŏr | choŏsing |
Which tŏ | fōllŏw, | fŏr tŏ | lĕave
Ăny, | seēms ă | lŏsing. |

It must be observed, here, that I do not grant this to be the "ordinary" *scansion*. On the contrary, I never yet met the man who had the faintest comprehension of the true scanning of these lines, or of such as these. But granting this to be the mode in which our Prosodies would divide the feet, they would accentuate the syllables as just above.

Now, let any reasonable person compare the two modes. The first advantage seen in my mode is that of simplicity—of time, labor, and ink saved. Counting the fractions as *two* accents, even, there will be found only *twenty-six* accents to the stanza. In the common accentuation there are *forty-one.* But admit that all this is a trifle, which it is *not,* and let us proceed to points of importance. Does the common accentuation express the truth, in particular, in general, or in any regard? Is it consistent with itself? Does it convey either to the ignorant or to the scholar a just conception of the rhythm of the lines? Each of these questions must be answered in the negative. The crescents, being precisely similar, must be understood as expressing, all of them, one and the same thing: and so all prosodies have always understood them and wished them to be understood. They express, indeed, "short"—but this word has all kinds of meanings. It serves to represent (the reader is left to guess *when*) sometimes the half, sometimes the third, sometimes the fourth, sometimes the sixth, of "long"—while "long" itself, in the books, is left undefined and undescribed. On the other hand, the horizontal accent, it may be said, expresses sufficiently well, and unvaryingly, the syllables which are meant to be long. It does nothing of the kind. This horizontal accent is placed over the cæsura (wherever, as in the Latin Prosodies, the cæsura is recognised) as well as over the ordinary long syllable, and implies anything and everything, just as the crescent. But grant that it does express the ordinary long syllables, (leaving the cæsura out of question,) have I not given the identical expression, by not employing any expression at all? In a word, while the Prosodies, with a certain number of accents, express *precisely nothing whatever*, I, with scarcely half the number, have expressed everything which, in a system of accentuation, demands expression. In glancing at my mode in the lines of Mr. Cranch, it will be seen that it conveys not only the exact relation of the syllables and feet, among themselves, in those particular lines, but their precise value in relation to any other existing or conceivable feet or syllables, in any existing or conceivable system of rhythm.

The object of what we call *scansion* is the distinct marking of the rhythmical flow. Scansion with accents or perpendicular lines between the feet—that is to say scansion *by* the voice only—is scansion *to* the ear only; and all very good in its way. The written scansion addresses the ear through the eye. In either case the object is the distinct marking of the rhythmical, musical, or reading flow. There *can* be no other object and there is none. Of course, then, the scansion and the reading flow should go hand in hand. The former must agree with the latter. The former represents and expresses the latter; and is good or bad as it truly or falsely represents and expresses it. If by the written scansion of a line we are not enabled to perceive any rhythm or music in the line, then either the line is unrhythmical or the scansion false. Apply all this to the English lines which we have quoted, at various points, in the course of this article. It will be found that the scansion exactly conveys the rhythm, and thus thoroughly fulfils the only purpose for which scansion is required.

But let the scansion *of the schools* be applied to the Greek and Latin verse and what result do we find?—that the verse is one thing and the scansion quite another. The ancient verse, *read* aloud, is in general musical, and occasionally *very* musical. *Scanned* by the Prosodial rules we can, for the most part, make nothing of it whatever. In the case of the English verse, the more emphatically we dwell on the divisions between the feet, the more distinct is our perception of the kind of rhythm intended. In the case of the Greek and Latin, the more we dwell the *less* distinct is this perception. To make this clear by an example:

Mæcenas, atavis edite regibus,
O, et præsidium et dulce decus meum,
Sunt quos curriculo pulverem Olympicum
Collegisse juvat, metaque fervidis
Evitata rotis, palmaque nobilis
Terrarum dominos evehit ad Deos.

Now in *reading* these lines, there is scarcely one person in a thousand who, if even ignorant of Latin, will not immediately feel and appreciate their flow—their music. A prosodist, however, informs the public that the *scansion* runs thus:

Mæce | nas ata | vis | edite | regibus |
O, et | præsidi' | et | dulce de | cus meum |
Sunt quos | curricu | lo | pulver' O | lympicum |
Colle | gisse | ju | vat | metaque | fervidis |
Evi | tata ro | tis | palmaque | nobilis |
Terra | rum domi | nos | evehit | ad Deos.—

Now I do not deny that we get a *certain sort* of music from the lines if we read them according to this scansion, but I wish to call attention to the fact that this scansion and the certain sort of music which grows out of it, are entirely at war not only with the reading flow which any ordinary person would naturally give the lines, but with the reading flow universally given them, and never denied them, by even the most obstinate and stolid of scholars.

And now these questions are forced upon us—"Why exists this discrepancy between the modern verse with its scansion, and the ancient verse with its scansion?"—"Why, in the former case, are there agreement and representation, while in the later there is neither the one nor the other?" or, to come to the point,—"How are we to reconcile the ancient verse with the scholastic scansion of it?" This absolutely necessary conciliation—shall we bring it about by supposing the scholastic scansion wrong because the ancient verse is right, or by maintaining that the ancient verse is wrong because the scholastic scansion is not to be gainsayed?

Were we to adopt the latter mode of arranging the difficulty, we might, in some measure, at least simplify the expression of the arrangement by putting it thus—Because the pedants have no eyes therefore the old poets had no ears.

"But," say the gentlemen without the eyes, "the scholastic scansion, although certainly not handed down to us in form from the old poets themselves (the gentlemen without the ears,) is nevertheless deduced from certain facts which are supplied us by careful observation of the old poems."

And let us illustrate this strong position by an example from an American poet—who must be a poet of some eminence, or he will not answer the purpose. Let us take Mr. Alfred B. Street. I remember these two lines of his:

His sinuous path, by blazes, wound
Among trunks grouped in myriads round.

With the *sense* of these lines I have nothing to do. When a poet is in a "fine frenzy," he may as well imagine a large forest as a small one—and "by blazes!" is *not* intended for an oath. My concern is with the rhythm, which is iambic.

Now let us suppose that, a thousand years hence, when the "American language" is dead, a learned prosodist should be deducing from "careful observation" of our best poets, a system of scansion for our poetry. And let us suppose that this prosodist had so little dependence in the generality and immutability of the laws of Nature, as to assume in the outset, that, because we lived a thousand years before his time, and made use of steam-engines instead of mesmeric balloons, we must therefore have had a *very* singular fashion of mouthing our vowels, and altogether of hudsonizing our verse. And let us suppose that with these and other fundamental propositions carefully put away in his brain, he should arrive at the line,—

Among | trunks grouped | in my | riads round.

Finding it an obviously iambic rhythm, he would divide it as above; and observing that "trunks" made the first membe. of an iambus, he would call it short, as Mr. Street intended it to be. Now farther:—if instead of admitting the possibility that Mr. Street, (who by that time would be called Street simply, just as we say Homer,) —that Mr. Street might have been in the habit of writing carelessly, as the poets of the prosodist's own era did, and as all poets will do (on account of being geniuses,)—instead of admitting this, suppose the learned scholar should make a "rule" and put it in a book, to the effect that, in the American verse, the vowel *u, when found imbedded among nine consonants,* was *short:* what, under such circumstances, would the sensible people of the scholar's day have a right not only to think, but to say of that scholar?—why, that he was "a fool—by blazes!"

I have put an extreme case, but it strikes at the root of the error. The "rules" are grounded in "authority:" and this "authority"—can any one tell us what it means? or can any one suggest anything that it may *not* mean? Is it not clear that the "scholar" above referred to, might as readily have deduced from authority a totally false system as a partially true one? To deduce from authority a consistent prosody of the ancient metres would indeed have been within the limits of the barest possibility; and the task has *not* been accomplished, for the reason that it demands a species of ratiocination altogether out of keeping with the brain of a bookworm. A rigid scrutiny will show that the very few "rules" which have not as many exceptions as examples, are those which have, by accident, their true bases not in authority, but in the omniprevalent laws of syllabification; such, for example, as the rule which declares a vowel before two consonants to be long.

In a word, the gross confusion and antagonism of the scholastic prosody, as well as its marked inapplicability to the reading flow of the rhythms it pretends to illustrate, are attributable, first, to the utter absence of natural principle as a guide in the investigations which have been undertaken by inadequate men; and secondly, to the neglect of the obvious consideration that the ancient poems, which have been the *criteria* throughout, were the work of men who must have written as loosely, and with as little definitive system, as ourselves.

Were Horace alive to-day, he would divide for us his first Ode thus, and "make great eyes" when assured by the prosodists that he had no business to make any such division!

Mæcenas | atavis | edite | regibus |
O et præ | sidium et | dulce de | cus meum |
Sunt quos cur | riculo | pulverem O | lympicum |
Collegisse | juvat | metaque | fervidis |
Evitata | rotis | palmaque | nobilis |
Terrarum | dominos | evehit | ad Deos. |

Read by this scansion, the flow is preserved; and the more we dwell on the divisions, the more the intended rhythm becomes apparent. Moreover, the feet have all the same time; while, in the scholastic scansion, trochees—admitted trochees—are absurdly employed as equivalents to spondees and dactyls. The books declare, for instance, that *Colle,* which begins the fourth line, is a trochee, and seem to be gloriously unconscious that to put a trochee in opposition with a longer foot, is to violate the inviolable principle of all music, *time.*

It will be said, however, by "some people," that I have no business to make a dactyl out of such obviously long syllables as *sunt, quos, cur.* Certainly I have no business to do so. I *never* do so. And Horace should not have done so. But he did. Mr. Bryant and Mr. Longfellow do the same thing every day. And merely because these gentlemen, now and then, forget themselves in this way, it would be hard if some future prosodist should insist upon twisting the "Thanatopsis," or the "Spanish Student," into a jumble of trochees, spondees, and dactyls.

It may be said, also, by some other people, that in the word *decus,* I have succeeded no better than the books, in making the scansional agree with the reading flow; and that *decus* was not pronounced de*cus.* I reply, that there can be no doubt of the word having been pronounced, in this case, de*cus.* It must be observed, that the Latin inflection, or variation of a word in its terminating syllables, caused the Romans—*must* have caused them, to pay greater attention to the termination of a word than to its commencement, or than we do to the terminations of our words. The end of the Latin word established that relation of the word with other words which we establish by prepositions or auxiliary verbs. Therefore, it must seem infinitely less odd to them than it does to us, to dwell at any time, for any slight purpose, abnormally, on a terminating syllable. In verse, this license—scarcely a license—would be frequently admitted. These ideas unlock the secret of such lines as the

Litoreis ingens inventa sub ilici*bus sus*,

and the

Parturiunt montes et nascitur ridicu*lus mus*,

which I quoted, some time ago, while speaking of rhyme.

As regards the prosodial elisions such as that of *rem* before *O*, in *pulverem Olympicum*, it is really difficult to understand how so dismally silly a notion could have entered the brain even of a pedant. Were it demanded of me why the books cut off one *vowel* before another, I might say—It is, perhaps, because the books think that, since a bad reader is so apt to slide the one vowel into the other at any rate, it is just as well to print them *ready-slided.* But in the case of the terminating *m*, which is the most readily pronounced of all consonants, (as the infantile *mamma* will testify,) and the most impossible to cheat the ear of by any system of sliding—in the

case of the *m*, I should be driven to reply that, to the best of my belief, the prosodists did the thing, because they had a fancy for doing it, and wished to see how funny it would look after it was done. The thinking reader will perceive that, from the great facility with which *em* may be enunciated, it is admirably suited to form one of the rapid short syllables in the bastard dactyl (pulverem O;)
s s s
but because the books had no conception of a bastard dactyl, they knocked it in the head at once—by cutting off its tail!

Let me now give a specimen of the true scansion of another Horatian measure—embodying an instance of proper elision.

Integer | vitæ | scelerisque | purus |
s s s s s
Non eget | Mauri | jaculis ne | que arcu |
s s s s s
Nec vene | natis | gravida sa | gittis,
s s s s s
Fusce pha | retrâ.
s s

Here the regular recurrence of the bastard dactyl, gives great animation to the rhythm. The *e* before the *a* in *que arcu*, is, almost of sheer necessity, cut off—that is to say, run into the *a* so as to preserve the spondee. But even this license it would have been better not to take.

Had I space, nothing would afford me greater pleasure than to proceed with the scansion of *all* the ancient rhythms, and to show how easily, by the help of common sense, the intended music of each and all can be rendered instantaneously apparent. But I have already overstepped my limits, and must bring this paper to an end.

It will never do, however, to omit all mention of the heroic hexameter.

I began the "processes" by a suggestion of the spondee as the first step towards verse. But the innate monotony of the spondee has caused its disappearance, as the basis of rhythm, from all modern poetry. We *may* say, indeed, that the French heroic—the most wretchedly monotonous verse in existence—is, to all intents and purposes, spondaic. But it is not designedly spondaic—and if the French were ever to examine it at all, they would no doubt pronounce it iambic. It must be observed, that the French language is strangely peculiar in this point—*that it is without accentuation, and consequently without verse.* The genius of the people, rather than the structure of the tongue, declares that their words are, for the most part, enunciated with an uniform dwelling on each syllable. For example—*we* say, "syll*abification*." A Frenchman would say, syl-la-bi-fi-ca-ti-on; dwelling on no one of the syllables with any noticeable particularity. Here again I put an extreme case, in order to be well understood; but the general fact is as I give it—that, comparatively, the French have *no* accentuation. And there can be nothing worth the name of verse, without. Therefore, the French have no verse worth the name—which is the fact, put in sufficiently plain terms. Their iambic rhythm so superabounds in absolute spondees, as to warrant me in calling its basis spondaic; but French is the *only* modern tongue which has any rhythm with such basis; and even in the French, it is, as I have said, unintentional.

Admitting, however, the validity of my suggestion, that the spondee was the first approach to verse, we should expect to find, first, natural spondees (words each forming just a spondee,) most abundant in the most ancient languages; and, secondly, we should expect to find spondees forming the basis of the most ancient rhythms. These expectations are in both cases confirmed.

Of the Greek hexameter, the intentional basis is spondaic. The dactyls are the *variation* of the theme. It will be observed that there is no absolute certainty about *their* points of interposition. The penultimate foot, it is true, is usually a dactyl; but not uniformly so; while the ultimate, on which the ear *lingers*, is always a spondee. Even that the penultimate is usually a dactyl may be clearly referred to the necessity of winding up with the *distinctive* spondee. In corroboration of this idea, again, we should look to find the penultimate spondee most usual in the most ancient verse; and, accordingly, we find it more frequent in the Greek than in the Latin hexameter.

But besides all this, spondees are not only more prevalent in the heroic hexameter than dactyls, but occur to such an extent as is even unpleasant to modern ears, on account of monotony. What the modern chiefly appreciates and admires in the Greek hexameter, is the *melody of the abundant vowel sounds*. The Latin hexameters *really* please very few moderns—although so many pretend to fall into ecstasies about them. In the hexameters quoted, several pages ago, from Silius Italicus, the preponderance of the spondee is strikingly manifest. Besides the natural spondees of the Greek and Latin, numerous artificial ones arise in the verse of these tongues on account of the tendency which inflection has to throw full accentuation on terminal syllables; and the preponderance of the spondee is farther ensured by the comparative infrequency of the small prepositions which *we* have to serve us *instead* of case, and also the absence of the diminutive auxiliary verbs with which *we* have to eke out the expression of our primary ones. These are the monosyllables whose abundance serve to stamp the poetic genius of a language as tripping or dactylic.

Now paying no attention to these facts, Sir Philip Sidney, Professor Longfellow, and innumerable other persons more or less modern, have busied themselves in constructing what they supposed to be "English hexameters on the model of the Greek." The only difficulty was that (even leaving out of question the melodious masses of vowel,) these gentlemen never could get their English hexameters to *sound* Greek. Did they *look* Greek?—that should have been the query; and the reply might have led to a solution of the riddle. In placing a copy of ancient hexameters side by side with a copy (in similar type) of such hexameters as Professor Longfellow, or Professor Felton, or the Frogpondian

Professors collectively, are in the shameful practice of composing "on the model of the Greek," it will be seen that the latter (hexameters, not professors) are about one-third longer *to the eye*, on an average, than the former. The more abundant dactyls make the difference. And it is the greater number of spondees in the Greek than in the English—in the ancient than in the modern tongue—which has caused it to fall out that while these eminent scholars were groping about in the dark for a Greek hexameter, which is a spondaic rhythm varied now and then by dactyls, they merely stumbled, to the lasting scandal of scholarship, over something which, on account of its long-leggedness, we may as well term a Feltonian hexameter, and which is a dactylic rhythm, interrupted, rarely, by artificial spondees which are no spondees at all, and which are curiously thrown in by the heels at all kinds of improper and impertinent points.

Here is a specimen of the Longfellowian hexameter.

Also the | church with | in was a | dorned for | this was the | season |
In which the | young their | parents' | hope and the | loved ones of | Heaven |[*]
Should at the | foot of the | altar re | new the | vows of their | baptism |
Therefore each | nook and | corner was | swept and | cleaned and the | dust was |
Blown from the | walls and | ceiling and | from the | oil-painted | benches. |

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[*] Poe's quotation.—EDITOR.

Mr. Longfellow is a man of imagination—but *can* he imagine that any individual, with a proper understanding of the danger of lockjaw, would make the attempt of twisting his mouth into the shape necessary for the emission of such spondees as "par*ents*," and "from the," or such dactyls as "cleaned and the" and "loved ones of?" "Baptism" is by no means a bad spondee—perhaps because it happens to be a dactyl:—of all the rest, however, I am dreadfully ashamed.

But these feet—dactyls and spondees, all together,—should thus be put at once into their proper position:

> "Also, the church within was adorned; for this was the season in which the young, their parents' hope, and the loved ones of Heaven, should, at the feet of the altar, renew the vows of their baptism. Therefore, each nook and corner was swept and cleaned; and the dust was blown from the walls and ceiling, and from the oil-painted benches."

There!—That is respectable prose; and it will incur no danger of ever getting its character ruined by any body's mistaking it for verse.

But even when we let these modern hexameters go, as Greek, and merely hold them fast in their proper character of Longfellowian, or Feltonian, or Frogpondian, we must still condemn them as having been committed in a radical misconception of the philosophy of verse. The spondee, as I observed, is the *theme* of the Greek line. Most of the ancient hexameters *begin* with spondees, for the reason that the spondee *is* the theme; and the ear is filled with it as with a burden. Now the Feltonian dactylics have, in the same way, dactyls for the theme, and most of them begin with dactyls—which is all very proper if not very Greek—but, unhappily, the one point at which they *are* very Greek is that point, precisely, at which they should be nothing but Feltonian. They always *close* with what is meant for a spondee. To be consistently silly, this should die off in a dactyl.

That a truly Greek hexameter *cannot*, however, be readily composed in English, is a proposition which I am by no means inclined to admit. I think I could manage the point myself. For example:

Do tell! | when may we | hope to make | men of sense | out of the | Pundits |
Born and brought | up with their | snouts deep | down in the | mud of the | Frog-pond?
Why ask? | who ever | yet saw | money made | out of a | fat old |
Jew, or | downright | upright | nutmegs | out of a | pine-knot?

The proper spondee predominance is here preserved. Some of the dactyls are not so good as I could wish—but, upon the whole, the rhythm is very decent—to say nothing of its excellent sense.

# OLD ENGLISH POETRY*

[Published in the *Broadway Journal*, May 17, 1845.]

It should not be doubted that least one-third of the affection with which we regard the elder poets of Great Britain should be attributed to what is, in itself, a thing apart from poetry—we mean to the simple love of the antique—and that, again, a third of even the proper *poetic sentiment* inspired by their writings, should be ascribed to a fact which, while it has strict connection with poetry in the abstract, and with the old British poems themselves, should not be looked upon as a merit appertaining to the authors of the poems. Almost every devout admirer of the old bards, if demanded his opinion of their productions, would mention vaguely, yet with perfect sincerity, a sense of dreamy, wild, indefinite, and he would perhaps say, indefinable delight; on being required to point out the source of this so shadowy pleasure, he would be apt to speak of the quaint in phraseology, and in general handling. This quaintness is, in fact, a very powerful adjunct to ideality, but in the case in question it arises independently of the author's will, and is altogether apart from his intention. Words and their rhythm have varied. Verses which affect us to-day with a vivid delight, and which delight, in many instances, may be traced to the one source, quaintness, must have worn in the days of their construction, a very commonplace air. This is, of course, no argument against the poems *now*—we mean it only as against the poets *then*. There is a growing desire to overrate them. The old English muse was frank, guileless, sincere, and although very learned, still learned without art. No general error evinces a more thorough confusion of ideas than the error of supposing Donne and Cowley metaphysical in the sense wherein Wordsworth and Coleridge are so. With the two former ethics were the end—with the two latter the means. The poet of the "Creation" wished, by highly artificial verse, to inculcate what he supposed to be moral truth—the poet of the "Ancient Mariner" to infuse the Poetic Sentiment through channels suggested by analysis. The one finished by complete failure what he commenced in the grossest misconception; the other, by a path which could not possibly lead him astray, arrived at a triumph which is not the less glorious because hidden from the profane eyes of the multitude. But in this view even the "metaphysical verse" of Cowley is but evidence of the simplicity and single-heartedness of the man. And he was in this but a type of his

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* A review of "The Book of Gems," edited by S. C. Hall.

*school*—for we may as well designate in this way the entire class of writers whose poems are bound up in the volume before us, and throughout all of whom there runs a very perceptible general character. They used little art in composition. Their writings sprang immediately from the soul —and partook intensely of that soul's nature. Nor is it difficult to perceive the tendency of this *abandon*—to elevate immeasurably all the energies of mind—but, again, so to mingle the greatest possible fire, force, delicacy, and all good things, with the lowest possible bathos, baldness, and imbecility, as to render it not a matter of doubt that the average results of mind in such a school will be found inferior to those results in one (*ceteris paribus*) more artificial.

We cannot bring ourselves to believe that the selections of the "Book of Gems" are such as will impart to a poetical reader the clearest possible idea of the beauty of the *school*—but if the intention had been merely to show the school's character, the attempt might have been considered successful in the highest degree. There are long passages now before us of the most despicable trash, with no merit whatever beyond that of their antiquity. The criticisms of the editor do not particularly please us. His enthusiasm is too general and too vivid not to be false. His opinion, for example, of Sir Henry Wotton's "Verses on the Queen of Bohemia"—that "there are few finer things in our language," is untenable and absurd.

"You meaner beauties of the Night
  That poorly satisfy our eyes
More by your number than your light,
  You common people of the skies,
  What are you when the sun shall rise?

"You curious chanters of the wood
  That warble forth dame Nature's lays,
Thinking your passions understood
  By your weak accents—what's your praise
  When Philomel her voice shall raise?

"You violets that first appear,
  By your pure purple mantles known,
Like the proud virgins of the year,
  As if the spring were all your own,
  What are you when the rose is blown?

  So, when my mistress shall be seen
  In sweetness of her looks and mind,
By virtue first, then choice, a queen,
  Tell me if she were not designed
  Th' eclipse and glory of her kind?"

In such lines we can perceive not one of those higher attributes of Poesy which belong to her in all circumstances and throughout all time. Here everything is art, nakedly, or but awkwardly concealed. No prepossession for the mere antique (and in this case we can imagine no other prepossession) should induce us to dignify with the sacred name of poetry, a series, such as this, of elaborate and threadbare compliments, stitched, apparently, together, without fancy, without plausibility, and without even an attempt at adaptation.

In common with all the world, we have been much delighted with "The Shepherd's Hunting" by Withers—a poem partaking, in a remarkable degree, of the peculiarities of *Il Penseroso.* Speaking of Poesy, the author says:—

"By the murmur of a spring,
Or the least boughs rusteling,
By a daisy whose leaves spread,
Shut when Titan goes to bed,
Or a shady bush or tree,
She could more infuse in me
Than all Nature's beauties can
In some other wiser man.
By her help I also now
Make this churlish place allow
Something that may sweeten gladness
In the very gall of sadness—
The dull loneness, the black shade,
That these hanging vaults have made
The strange music of the waves
Beating on these hollow caves,
This black den which rocks emboss,
Overgrown with eldest moss,
The rude portals that give light
More to terror than delight,
This my chamber of neglect
Walled about with disrespect;
From all these and this dull air
A fit object for despair,
She hath taught me by her might
To draw comfort and delight."

But these lines, however good, do not bear with them much of the general character of the English antique. Something more of this will be found in Corbet's "Farewell Rewards and Fairies!" We copy a portion of Marvell's "Maiden Lamenting for her Fawn," which we prefer—not only as a specimen of the elder poets, but in itself as a beautiful poem, abounding in pathos, exquisitely delicate imagination and truthfulness—to anything of its species:—

"It is a wondrous thing how fleet
'Twas on those little silver feet,
With what a pretty skipping grace
It oft would challenge me the race,
And when't had left me far away
'Twould stay, and run again, and stay;
For it was nimbler much than hinds,
And trod as if on the four winds.
I have a garden of my own,
But so with roses overgrown,

And lilies, that you would it guess
To be a little wilderness;
And all the spring-time of the year
It only lovéd to be there.
Among the beds of lilies I
Have sought it oft where it should lie,
Yet could not, till itself would rise,
Find it, although before mine eyes.
For in the flaxen lilies shade
It like a bank of lilies laid;
Upon the roses it would feed
Until its lips even seemed to bleed,
And then to me 'twould boldly trip,
And print those roses on my lip.
But all its chief delight was still
With roses thus itself to fill,
And its pure virgin limbs to fold
In whitest sheets of lilies cold.
Had it lived long, it would have been
Lilies without, roses within."

How truthful an air of lamentations hangs here upon every syllable! It pervades all. It comes over the sweet melody of the words—over the gentleness and grace which we fancy in the little maiden herself—even over the half-playful, half-petulant air with which she lingers on the beauties and good qualities of her favorite—like the cool shadow of a summer cloud over a bed of lilies and violets, "and all sweet flowers." The whole is redolent with poetry of a very lofty order. Every line is an idea conveying either the beauty and playfulness of the fawn, or the artlessness of the maiden, or her love, or her admiration, or her grief, or the fragrance and warmth and *appropriateness* of the little nest-like bed of lilies and roses which the fawn devoured as it lay upon them, and could scarcely be distinguished from them by the once happy little damsel who went to seek her pet with an arch and rosy smile on her face. Consider the great variety of truthful and delicate thought in the few lines we have quoted—the *wonder* of the little maiden at the fleetness of her favorite—the "little silver feet"—the fawn challenging his mistress to a race with "a pretty skipping grace," running on before, and then, with head turned back, awaiting her approach only to fly from it again—can we not distinctly perceive all these things? How exceedingly vigorous, too, is the line,

"And trod as if on the four winds!"

A vigor apparent only when we keep in mind the artless character of the speaker and the four feet of the favorite, one for each wind. Then consider the garden of "my own," so overgrown, entangled with roses and lilies, as to be "a little wilderness"—the fawn loving to be there, and there "only"—the maiden seeking it "where it *should* lie"—and not being able to distinguish it from the flowers until "itself would rise"—the lying among the lilies "like a bank of lilies"—the loving to "fill itself with roses,"

"And its pure virgin limbs to fold
In whitest sheets of lilies cold,"

and these things being its "chief" delights—and then the pre-eminent beauty and naturalness of the concluding lines, whose very hyperbole only renders them more true to nature when we consider the innocence, the artlessness, the enthusiasm, the passionate girl, and more passionate admiration of the bereaved child—

"Had it lived long, it would have been
Lilies without, roses within."

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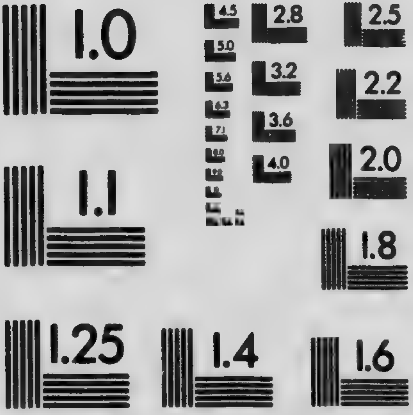

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# MAELZEL'S CHESS-PLAYER

[Published in the *Southern Literary Messenger*, April, 1836.]

PERHAPS no exhibition of the kind has ever elicited so general attention as the Chess-Player of Maelzel. Wherever seen it has been an object of intense curiosity to all persons who think. Yet the question of its *modus operandi* is still undetermined. Nothing has been written on this topic which can be considered as decisive—and accordingly we find everywhere men of mechanical genius, of great general acuteness and discriminative understanding, who make no scruple in pronouncing the Automaton a *pure machine*, unconnected with human agency in its movements, and consequently, beyond all comparison, the most astonishing of the inventions of mankind. And such it would undoubtedly be, were they right in their supposition. Assuming this hypothesis, it would be grossly absurd to compare with the Chess-Player any similar thing of either modern or ancient days. Yet there have been many and wonderful automata. In Brewster's "Letters on Natural Magic," we have an account of the most remarkable. Among these may be mentioned, as having beyond doubt existed, firstly, the coach invented by M. Camus for the amusement of Louis XIV. when a child. A table, about four feet square, was introduced into the room and appropriated for the exhibition. Upon this table was placed a carriage six inches in length, made of wood, and drawn by two horses of the same material. One window being down, a lady was seen on the back seat. A coachman held the reins on the box, and a footman and page were in their places behind. M. Camus now touched a spring; whereupon the coachman smacked his whip, and the horses proceeded in a natural manner along the edge of the table, drawing after them the carriage. Having gone as far as possible in this direction, a sudden turn was made to the left, and the vehicle was driven at right angles to its former course, and still closely along the edge of the table. In this way the coach proceeded until it arrived opposite the chair of the young prince. It then stopped, the page descended and opened the door, the lady alighted and presented a petition to her sovereign. She then re-entered. The page put up the steps, closed the door, and resumed his station. The coachman whipped his horses, and the carriage was driven back to its original position.

The Magician of M. Maillardet is also worthy of notice. We copy the following account of it from the "Letters" before mentioned of Dr. B., who derived his information principally from the "Edinburgh Encyclopædia."

"One of the most popular pieces of mechanism which we have seen, is the Magician constructed by M. Maillardet, for the purpose of answering certain given questions. A figure, dressed like a magician, appears seated at the bottom of a wall, holding a wand in one hand, and a book in the other. A number of questions, ready prepared, are inscribed on oval medallions, and the spectator takes any of these he chooses, and to which he wishes an answer, and having placed it in a drawer ready to receive it, the drawer shuts with a spring till the answer is returned. The magician then arises from his seat, bows his head, describes circles with his wand, and consulting the book as if in deep thought, he lifts it toward his face. Having thus appeared to ponder over the proposed question, he raises his wand, and striking with it the wall above his head, two folding-doors fly open, and display an appropriate answer to the question. The doors again close, the magician resumes his original position, and the drawer opens to return the medallion. There are twenty of these medallions, all containing different questions, to which the magician returns the most suitable and striking answers. The medallions are thin plates of brass, of an elliptical form, exactly resembling each other. Some of the medallions have a question inscribed on each side, both of which the magician answers in succession. If the drawer is shut without a medallion being put in it, the magician rises, consults his book, shakes his head, and resumes his seat; the folding doors remain shut, and the drawer is returned empty. If two medallions are put into the drawer together, an answer is returned only to the lower one. When the machinery is wound up, the movements continue about an hour, during which time about fifty persons may be answered. The inventor stated that the means by which the different medallions acted upon the machinery, so as to produce the proper answers to the questions which they contained, were extremely simple."

The Duck of Vaucanson was still more remarkable. It was of the size of life, and so perfect an imitation of the living animal that all the spectators were deceived. It executed, says Brewster, all the natural movements and gestures, it ate and drank with avidity, performed all the quick motions of the head and throat which are peculiar to the duck, and like it muddled the water which it drank with its bill. It produced also the sound of quacking in the most natural manner. In the anatomical structure the artists exhibited the highest skill. Every bone in the real duck had its representative in the automaton, and its wings were anatomically exact. Every cavity, apophysis, and curvature was imitated, and each bone executed its proper movements. When corn was thrown down before it, the duck stretched out its neck to pick it up, swallowed, and digested it.*

But if these machines were ingenious, what shall we think of the calculating machine of Mr.

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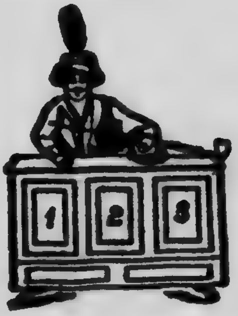
* Under the head *Androides* in the "Edinburgh Encyclopædia" may be found a full account of the principal automata of ancient and modern times.

Babbage? What shall we think of an engine of wood and metal which can not only compute astronomical and navigation tables to any given extent, but render the exactitude of its operations mathematically certain through its power of correcting its possible errors? What shall we think of the machine which can not only accomplish all this, but actually print off its elaborate results, when obtained, without the slightest intervention of the intellect of man? It will, perhaps, be said in reply, that a machine such as we have described is altogether above comparison with the Chess-Player of Maelzel. By no means —it is altogether beneath it—that is to say, provided we assume (what should never for a moment be assumed) that the Chess-Player is a *pure machine,* and performs its operations without any immediate human agency. Arithmetical or algebraical calculations are, from their very nature, fixed and determinate. Certain *data* being given, certain results necessarily and inevitably follow. These results have dependence upon nothing, and are influenced by nothing but the *data* originally given. And the question to be solved proceeds, or should proceed, to its final determination, by a succession of unerring steps liable to no change, and subject to no modification. This being the case, we can without difficulty conceive the *possibility* of so arranging a piece of mechanism, that upon starting it in accordance with the *data* of the question to be solved, it should continue its movements, regularly, progressively, and undeviatingly toward the required solution, since these movements, however complex, are never imagined to be otherwise than finite and determinate. But the case is widely different with the Chess-Player. With him there is no determinate progression. No one move in chess necessarily follows upon any one other. From no particular disposition of the men at one period of a game can we predicate their disposition at a different period. Let us place the *first move* in a game of chess, in juxtaposition with the *data* of an algebraical question, and their great difference will be immediately perceived. From the latter—from the *data*—the second step of the question, dependent thereupon, inevitably follows. It is modelled by the *data*. It must be *thus* and not otherwise. But from the first move in the game of chess no especial second move follows of necessity. In the algebraical question, as it proceeds toward solution, the *certainty* of its operations remains altogether unimpaired. The second step having been a consequence of the *data*, the third step is equally a consequence of the second, the fourth of the third, the fifth of the fourth, and so on, *and not possibly otherwise*, to the end. But in proportion to the progress made in a game of chess, is the *uncertainty* of each ensuing move. A few moves having been made, *no step is certain*. Different spectators of the game would advise different moves. All is then dependent upon the variable judgment of the players. Now even granting (what should not be granted) that the movements of the Automaton Chess-Player were in themselves determinate, they would be necessarily interrupted and disarranged by the indeterminate will of his antagonist. There is then no analogy whatever between the operations of the Chess-Player, and those of the calculating machine of Mr. Babbage, and if we choose to call the former a *pure machine* we must be prepared to admit that it is beyond all comparison, the most wonderful of the inventions of mankind. Its original projector, however, Baron Kempelen, had no scruple in declaring it to be a "very ordinary piece of mechanism—a *bagatelle* whose effects appeared so marvellous only from the boldness of the conception, and the fortunate choice of the methods adopted for promoting the illusion." But it is needless to dwell upon this point. It is quite certain that the operations of the Automaton are regulated by *mind,* and by nothing else. Indeed this matter is susceptible of a mathematical demonstration, *a priori*. The only question then is of the *manner* in which human agency is brought to bear. Before entering upon this subject it would be as well to give a brief history and description of the Chess-Player for the benefit of such of our readers as may never have had an opportunity of witnessing Mr. Maelzel's exhibition.

The Automaton Chess-Player was invented in 1769 by Baron Kempelen, a nobleman of Presburg, in Hungary, who afterward disposed of it, together with the secret of its operations, to its present possessor.* Soon after its completion it was exhibited in Presburg, Paris, Vienna, and other continental cities. In 1783 and 1784 it was taken to London by Mr. Maelzel. Of late years it has visited the principal towns in the United States. Wherever seen, the most intense curiosity was excited by its appearance, and numerous have been the attempts, by men of all classes, to fathom the mystery of its evolutions. The cut above gives a tolerable representation of the figure as seen by the citizens of Richmond a few weeks ago. The right arm, however, should lie more at length upon the box, a chess-board should appear upon it, and the cushion should not be seen while the pipe is held. Some immaterial alterations have been made in the costume of the player since it came into the possession of Maelzel—the plume, for example, was not originally worn.



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* This was written in 1835, when Mr. Maelzel, recently deceased, was exhibiting the Chess-Player in the United States. It is now (1855), we believe, in the possession of Prof. J. K. Mitchell, M.D., of Philadelphia.—Griswold's Note.

At the hour appointed for exhibition, a curtain is withdrawn, or folding-doors are thrown open, and the machine rolled to within about twelve feet of the nearest of the spectators, between whom and it (the machine) a rope is stretched. A figure is seen habited as a Turk, and seated, with its legs crossed, at a large box apparently of maple-wood, which serves it as a table. The exhibitor will, if requested, roll the machine to any portion of the room, suffer it to remain altogether on any designated spot, or even shift its location repeatedly during the progress of a game. The bottom of the box is elevated considerably above the floor by means of the castors or brazen rollers on which it moves, a clear view of the surface immediately beneath the Automaton being thus afforded to the spectators. The chair on which the figure sits is affixed permanently to the box. On the top of this latter is a chess-board, also permanently affixed. The right arm of the Chess-Player is extended at full length before him, at right angles with his body, and lying, in an apparently careless position, by the side of the board. The back of the hand is upward. The board itself is eighteen inches square. The left arm of the figure is bent at the elbow, and in the left hand is a pipe. A green drapery conceals the back of the Turk, and falls partially over the front of both shoulders. To judge from the external appearance of the box, it is divided into five compartments—three cupboards of equal dimensions and two drawers occupying that portion of the chest lying beneath the cupboards. The foregoing observations apply to the appearance of the Automaton upon its first introduction into the presence of the spectators.

Maelzel now informs the company that he will disclose to their view the mechanism of the machine. Taking from his pocket a bunch of keys he unlocks with one of them, a door marked 1 in the cut, and throws the cupboard fully open to the inspection of all present. Its whole interior is apparently filled with wheels, pinions levers, and other machinery, crowded very closely together, so that the eye can penetrate but a little distance into the mass. Leaving this door open to its full extent, he goes now round to the back of the box, and raising the drapery of the figure, opens another door situated precisely in the rear of the one first opened. Holding a lighted candle at this door, and shifting the position of the whole machine repeatedly at the same time, a bright light is thrown entirely through the cupboard, which is now clearly seen to be full, completely full, of machinery. The spectators being satisfied of this fact, Maelzel closes the back door, locks it, takes the key from the lock, lets fall the drapery of the figure and comes round to the front. The door marked 1, it will be remembered is still open. The exhibitor now proceeds to open the drawer which lies beneath the cupboards at the bottom of the box—for although there are apparently two drawers, there is really only one—the two handles and two key-holes being intended merely for ornament. Having opened this drawer to its full extent, a small cushion, and a set of chessmen, fixed in a framework made to support them perpendicularly, are discovered. Leaving this drawer, as well as cupboard No. 1, open, Maelzel now unlocks door No. 2, and door No. 3, which are discovered to be folding doors, opening into one and the same compartment. To the right of this compartment, however, (that is to say to the spectators' right), a small division, six inches wide, and filled with machinery, is partitioned off. The main compartment itself (in speaking of that portion of the box visible upon opening doors 2 and 3, we shall always call it the main compartment) is lined with dark cloth and contains no machinery whatever beyond two pieces of steel, quadrant-shaped, and situated one in each of the rear top corners of the compartment. A small protuberance about eight inches square, and also covered with dark cloth, lies on the floor of the compartment near the rear corner on the spectators' left hand. Leaving doors No. 2 and No. 3 open, as well as the drawer and door No. 1, the exhibitor now goes round to the back of the main compartment, and, unlocking another door there, displays clearly all the interior of the main compartment, by introducing a candle behind it and within it. The whole box being thus apparently disclosed to the scrutiny of the company, Maelzel, still leaving the doors and drawer open, rolls the Automaton entirely round, and exposes the back of the Turk by lifting up the drapery. A door about ten inches square is thrown open in the loins of the figure, and a smaller one also in the left thigh. The interior of the figure, as seen through these apertures, appears to be crowded with machinery. In general, every spectator is now thoroughly satisfied of having beheld and completely scrutinized, at one and the same time, every individual portion of the Automaton, and the idea of any person being concealed in the interior, during so complete an exhibition of that interior, if ever entertained, is immediately dismissed as preposterous in the extreme.

M. Maelzel, having rolled the machine back into its original position, now informs the company that the Automaton will play a game of chess with any one disposed to encounter him. This challenge being accepted, a small table is prepared for the antagonist, and placed close by the rope, but on the spectators' side of it, and so situated as not to prevent the company from obtaining a full view of the Automaton. From a drawer in this table is taken a set of chess-men, and Maelzel arranges them generally, but not always, with his own hands, on the chess-board, which consists merely of the usual number of squares painted upon the table. The antagonist having taken his seat, the exhibitor approaches the drawer of the box, and takes therefrom the cushion, which, after removing the pipe from the hand of the Automaton, he places under its left arm as a support. Then taking also from the drawer the Automaton's set of chess-men, he arranges them upon the chess-board before the figure. He now proceeds to close the doors and to lock them—leaving the bunch of keys in door No. 1. He also closes the drawer, and, finally, winds up the machine, by applying a key to an aperture in the left end (the spectators' left) of the box. The game now commences—the Automaton taking the first move. The duration of the contest is usually limited to half an hour, but if it be not finished at the expiration of this period, and the antagonist still contends that he can beat the Automaton, M. Maelzel has seldom any objection to continue it. Not to weary the company is the ostensible and no doubt the real object of the limitation. It will of course be understood that when a move is made at his own table, by the antagonist, the corresponding move is made at the box of the Automaton, by Maelzel himself, who then acts as the representative of the antagonist. On the other hand, when the Turk moves, the corresponding move is made at the table of the antagonist, also by M. Maelzel, who then acts as the representative of the Automaton. In this manner it is necessary that the exhibitor should often pass from one table to the other. He also frequently goes in the rear of the figure to remove the chess-men which it has taken, and which it deposits, when taken, on the box to the left (to its own left) of the board. When the Automaton hesitates in relation to its move, the exhibitor is occasionally seen to place himself very near its right side, and to lay his hand now and then, in a careless manner, upon the box. He has also a peculiar shuffle with his feet, calculated to induce suspicion of collusion with the machine in minds which are more cunning than sagacious. These peculiarities are, no doubt, mere mannerisms of M. Maelzel, or, if he is aware of them at all, he puts them in practice with a view of exciting in the spectators a false idea of the pure mechanism in the Automaton.

The Turk plays with his left hand. All the movements of the arm are at right angles. In this manner, the hand (which is gloved and bent in a natural way), being brought directly above the piece to be moved, descends finally upon it, the fingers receiving it, in most cases, without difficulty. Occasionally, however, when the piece is not precisely in its proper situation the Automaton fails in his attempt at seizing it. When this occurs, no second effort is made, but the arm continues its movement in the direction originally intended, precisely as if the piece were in the fingers. Having thus designated the spot whither the move should have been made, the arm returns to its cushion, and Maelzel performs the evolution which the Automaton pointed out. At every movement of the figure machinery is heard in motion. During the progress of the game, the figure now and then rolls its eyes, as if surveying the board, moves its head, and pronounces the word *echec* (check) when necessary.* If a false move be made by his antagonist, he raps briskly on the box with the fingers of his right hand, shakes his head roughly, and replacing the piece falsely moved, in its former situation, assumes the next move himself. Upon beating the game, he waves his head with an air of triumph, looks around complacently upon the spectators, and drawing his left arm farther back than usual, suffers his fingers alone to rest upon the cushion. In general, the Turk is victorious —once or twice he has been beaten. The game being ended, Maelzel will again, if desired, exhibit the mechanism of the box, in the same manner as before. The machine is then rolled back, and a curtain hides it from the view of the company.

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* The making the Turk pronounce the word *echec*, is an improvement by M. Maelzel. When in possession of Baron Kempelen, the figure indicated a *check* by rapping on the box with his right hand.

There have been many attempts at solving the mystery of the Automaton. The most general opinion in relation to it, an opinion too not unfrequently adopted by men who should have known better, was, as we have before said, that no immediate human agency was employed—in other words, that the machine was purely a machine and nothing else. Many, however, maintained that the exhibitor himself regulated the movements of the figure by mechanical means operating through the feet of the box. Others, again, spoke confidently of a magnet. Of the first of these opinions we shall say nothing at present more than we have already said. In relation to the second it is only necessary to repeat what we have before stated, that the machine is rolled about on castors, and will, at the request of the spectator, be moved to and fro to any portion of the room, even during the progress of the game. The supposition of the magnet is also untenable—for if a magnet were the agent, any other magnet in the pocket of a spectator would disarrange the entire mechanism. The exhibitor, however, will suffer the most powerful loadstone to remain even upon the box during the whole of the exhibition.

The first attempt at a written explanation of the secret, at least the first attempt of which we ourselves have any knowledge, was made in a large pamphlet printed at Paris in 1785. The author's hypothesis amounted to this—that a dwarf actuated the machine. This dwarf he supposed to conceal himself during the opening of the box by thrusting his legs into two hollow cylinders, which were represented to be (but which are not) among the machinery in the cupboard No. 1, while his body was out of the box entirely, and covered by the drapery of the Turk. When the doors were shut the dwarf was enabled to bring his body within the box—the noise produced by some portion of the machinery allowing him to do so unheard, and also to close the door by which he entered. The interior of the Automaton being then exhibited, and no person discovered, the spectators, says the author of this pamphlet, are satisfied that no one is within any portion of the machine. The whole hypothesis was too obviously absurd to require comment or refutation, and accordingly we find that it attracted very little attention.

In 1789 a book was published at Dresden by M. I. F. Freyhere in which another endeavor was made to unravel the mystery. Mr. Freyhere's book was a pretty large one, and copiously illustrated by colored engravings. His supposition was that "a well-taught boy, very thin and tall of his age (sufficiently so that he could be concealed in a drawer almost immediately under the chess-board") played the game of chess and effected all the evolutions of the Automaton. This idea, although even more silly than that of the Parisian author, met with a better reception, and was in some measure believed to be the true solution of the wonder, until the inventor put an end to the discussion by suffering a close examination of the top of the box.

These bizarre attempts at explanation were followed by others equally bizarre. Of late years, however, an anonymous writer, by a course of reasoning exceedingly unphilosophical, has contrived to blunder upon a plausible solution—although we cannot consider it altogether the true one. His Essay was first published in a Baltimore weekly paper, was illustrated by cuts, and was entitled "An Attempt to Analyze the Automaton Chess-Player of M. Maelzel." This Essay we suppose to have been the original of the *pamphlet* to which Sir David Brewster alludes in his "Letters on Natural Magic," and which he has no hesitation in declaring a thorough and satisfactory explanation. The *results* of the analysis are undoubtedly, in the main, just; but we can only account for Brewster's pronouncing the Essay a thorough and satisfactory explanation, by supposing him to have bestowed upon it a very cursory and inattentive perusal. In the compendium of the Essay, made use of in the "Letters on Natural Magic," it is quite impossible to arrive at any distinct conclusion in regard to the adequacy or inadequacy of the analysis, on account of the gross misarrangement and deficiency of the letters of reference employed. The same fault is to be found in the "Attempt," etc., as we originally saw it. The solution consists in a series of minute explanations, (accompanied by woodcuts, the whole occupying many pages,) in which the object is to show the *possibility* of *so shifting the partitions* of the box, as to allow a human being, concealed in the interior, to move portions of his body from one part of the box to another, during the exhibition of the mechanism—thus eluding the scrutiny of the spectators. There can be no doubt, as we have before observed, and as we will presently endeavor to show, that the principle, or rather the result of this solution is the true one. Some person *is* concealed in the box during the whole time of exhibiting the interior. We object, however, to the whole verbose description of the *manner* in which the partitions are shifted, to accommodate the movements of the person concealed. We object to it as a mere theory assumed in the first place, and to which circumstances are afterward made to adapt themselves. It was not, and could not have been, arrived at by any inductive reasoning. In whatever way the shifting is managed, it is of cour concealed at every step from observation. show that certain movements might possibly be effected in a certain way, is very far from showing that they are actually so effected. There may be an infinity of other methods by which the same results may be obtained. The probability of the one assumed proving the correct one is then as unity to infinity. But, in reality, this particular point, the shifting of the partitions, is of no consequence whatever. It was altogether unnecessary to devote seven or eight pages for the purpose of proving what no one in his senses would deny—viz.: that the wonderful mechanical genius of Baron Kempelen could invent the necessary means for shutting a door or slipping aside a panel, with a human agent too at his service in actual contact with the panel or the door, and the whole operations carried on, as the author of the Essay himself shows, and as we shall attempt to show more fully hereafter, entirely out of reach of the observation of the spectators.

In attempting ourselves an explanation of the Automaton, we will, in the first place, endeavor to show how its operations are effected, and afterward describe, as briefly as possible, the nature of the *observations* from which we have deduced our result.

It will be necessary for a proper understanding of the subject that we repeat here in a few words, the routine adopted by the exhibitor in disclosing the interior of the box—a routine from which he *never* deviates in any material particular. In the first place he opens the door No. 1. Leaving this open, he goes round to the rear of the box, and opens a door precisely at the back of door No. 1. To this back door he holds a lighted candle. He then *closes the back door*, locks it, and, coming round to the front, opens the drawer to its full extent. This done, he opens the doors No. 2 and No. 3 (the folding doors), and displays the interior of the main compartment. Leaving open the main compartment, the drawer, and the front door of cupboard No. 1, he now goes to the rear again, and throws open the back door of the main compartment. In shutting up the box no particular order is observed, except that the folding-doors are always closed before the drawer.

Now, let us suppose that when the machine is first rolled into the presence of the spectators, a man is already within it. His body is situated behind the dense machinery in cupboard No. 1 (the rear portion of which machinery is so contrived as to slip *en masse*, from the main compartment to the cupboard No. 1, as occasion may require), and his legs lie at full length in the main compartment. When Maelzel opens the door No. 1, the man within is not in any danger of discovery, for the keenest eye cannot penetrate more than about two inches into the darkness within. But the case is otherwise when the back door of the cupboard No. 1 is opened. A bright light then pervades the cupboard, and the body of the man would be discovered if it were there. But it is not. The putting the key in the lock of the back door was a signal on hearing which the person concealed brought his body forward to an angle as acute as possible—throwing it altogether, or nearly so, into the main compartment. This, however, is a painful position, and cannot be long maintained. Accordingly we find that Maelzel *closes the back door*. This being done, there is no reason why the body of the man may not resume its former situation—for the cupboard is again so dark as to defy scrutiny. The drawer is now opened, and the legs of the person within drop down behind it in the space it formerly occupied.* There is, consequently, now no longer any part of the man in the main compartment—his body being behind the machinery in cupboard No. 1, and his legs in the space occupied by the drawer. The exhibitor, therefore, finds himself at liberty to display the main compartment. This he does—opening both its back and front doors—and no person is discovered. The spectators are now satisfied that the whole of the box is exposed to view—and exposed too, all portions of it at one and the same time. But of course this is not the case. They neither see the space behind the drawer, nor the interior of cupboard No. 1—the front door of which latter the exhibitor virtually shuts in shutting its back door. Maelzel, having now rolled the machine around, lifted up the drapery of the Turk, opened the doors in its back and thigh, and shown his trunk to be full of machinery, brings the whole back into its original position, and closes the doors. The man within is now at liberty to move about. He gets up into the body of the Turk just so high as to bring his eyes above the level of the chess-board. It is very probable that he seats himself upon the little square block or protuberance which is seen in a corner of the main compartment when the doors are open. In this position he sees the chess-board through the bosom of the Turk, which is of gauze. Bringing his right arm across his breast he actuates the little machinery necessary to guide the left arm and the fingers of the figure. This machinery is situated just beneath the left shoulder of the Turk, and is consequently easily reached by the right hand of the man concealed, if we suppose his right arm brought across the breast. The motion of the head and eyes, and of the right arm of the figure, as well as the sound *echec* are produced by other mechanism in the interior, and actuated at will by the man within. The whole of this mechanism—that is to say, all the mechanism essential to the machine—is most probably contained within the little cupboard (of about six inches in breadth) partitioned off at the right (the spectators' right) of the main compartment.

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* Sir David Brewster supposes that there is always a large space behind this drawer even when shut—in other words, that the drawer is a "false drawer," and does not extend to the back of the box. But the idea is altogether untenable. So commonplace a trick would be immediately discovered—especially as the drawer is always opened to its full extent, and an opportunity thus offered of comparing its depth with that of the box.

In this analysis of the operations of the Automaton, we have purposely avoided any allusion to the manner in which the partitions are shifted, and it will now be readily comprehended that this point is a matter of no importance, since, by mechanism within the ability of any common carpenter, it might be effected in an infinity of different ways, and since we have shown that, however performed, it is performed out of the view of the spectators. Our result is founded upon the following *observations* taken during frequent visits to the exhibition of Maelzel.*

1. The moves of the Turk are not made at regular intervals of time, but accommodate themselves to the moves of the antagonist—although this point (of regularity), so important in all kinds of mechanical contrivance, might have been readily brought about by limiting the time allowed for the moves of the antagonist. For example, if this limit were three minutes, the moves of the Automaton might be made at any given intervals longer than three minutes. The fact then of irregularity, when regularity might have been so easily attained, goes to prove that regularity is unimportant to the action of the Automaton—in other words, that the Automaton is not *a pure machine.*

2. When the Automaton is about to move a piece, a distinct motion is observable just beneath the left shoulder, and which motion agitates in a slight degree the drapery covering the

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* Some of these *observations* are intended merely to prove that the machine must be regulated *by mind,* and it may be thought a work of supererogation to advance further arguments in support of what has been already fully decided. But our object is to convince, in especial, certain of our friends upon whom a train of suggestive reasoning will have more influence than the most positive *a priori* demonstration.

front of the left shoulder. This motion invariably precedes, by about two seconds, the movement of the arm itself; and the arm never, in any instance, moves without this preparatory motion in the shoulder. Now let the antagonist move a piece, and let the corresponding move be made by Maelzel, as usual, upon the board of the Automaton. Then let the antagonist narrowly watch the Automaton, until he detect the preparatory motion in the shoulder. Immediately upon detecting this motion, and before the arm itself begins to move, let him withdraw his piece, as if perceiving an error in his manœuvre. It will then be seen that the movement of the arm, which, in all other cases, immediately succeeds the motion in the shoulder, is withheld,—is not made,—although Maelzel has not yet performed, on the board of the Automaton, any move corresponding to the withdrawal of the antagonist. In this case, that the Automaton was about to move is evident; and that he did not move, was an effect plainly produced by the withdrawal of the antagonist, and without any intervention of Maelzel.

This fact fully proves (1) that the intervention of Maelzel, in performing the moves of the antagonist on the board of the Automaton, is not essential to the movements of the Automaton; (2) that its movements are regulated by *mind*—by some person who sees the board of the antagonist; (3) that its movements are not regulated by the mind of Maelzel, whose back was turned toward the antagonist at the withdrawal of his move.

3. The Automaton does not invariably win the game. Were the machine a pure machine, this would not be the case—it would always win. The *principle* being discovered by which a machine can be made to *play* a game of chess, an extension of the same principle would enable it to *win* a game; a further extension would enable it to *win all* games—that is, to beat any possible game of an antagonist. A little consideration will convince any one that the difficulty of making a machine beat all games is not in the least degree greater, as regards the principle of the operations necessary, than that of making it beat a single game. If, then, we regard the Chess-Player as a machine, we must suppose (what is highly improbable) that its inventor preferred leaving it incomplete to perfecting in motion the mechanism of the Automaton when we reflect that the leaving it incomplete would afford an argument against the possibility of its being a pure machine—the very argument we now adduce.

4. When the situation of the game is difficult or complex, we never perceive the Turk either shake his head or roll his eyes. It is only when his next move is obvious, or when the game is so circumstanced that to a man in the Automaton's place there would be no necessity for reflection. Now, these peculiar movements of the head and eyes are movements customary with persons engaged in meditation, and the in-

genious Baron Kempelen would have adapted these movements (were the machine a pure machine) to occasions proper for their display —that is, to occasions of complexity. But the reverse is seen to be the case, and this reverse applies precisely to our supposition of a man in the interior. When engaged in meditation about the game he has no time to think of setting in motion the mechanism of the Automaton by which are moved the head and the eyes. When the game, however, is obvious, he has time to look about him, and, accordingly, we see the head shake and the eyes roll.

When the machine is rolled round to allow the spectators an examination of the back of the Turk, and when his drapery is lifted up and the doors in the trunk and thigh thrown open, the interior of the trunk is seen to be crowded with machinery. In scrutinizing this machinery while the Automaton was in motion—that is to say, while the whole machine was moving on the castors,—it appeared to us that certain portions of the mechanism changed their shape and position in a degree too great to be accounted for by the simple laws of perspective; and subsequent examinations convinced us that these undue alterations were attributable to mirrors in the interior of the trunk. The introduction of mirrors among the machinery could not have been intended to influence, in any degree, the machinery itself. Their operation—whatever that operation should prove to be—must necessarily have reference to the eye of the spectator. We at once concluded that these mirrors were so placed to multiply to the vision some few pieces of machinery within the trunk so as to give it the appearance of being crowded with mechanism. Now the direct inference from this is that the machine is not a pure machine. For if it were, the inventor, so far from wishing its mechanism to appear complex, and using deception for the purpose of giving it this appearance, would have been especially desirous of convincing those who witnessed his exhibition of the *simplicity* of the means by which results so wonderful were brought about.

6. The external appearance, and, especially, the deportment of the Turk, are, when we consider them as imitations of *life*, but very indifferent imitations. The countenance evinces no ingenuity. and is surpassed, in its resemblance to the human face, by the very commonest of wax-works. The eyes roll unnaturally in the head, without any corresponding motions of the lids or brows. The arm, particularly, performs its operations in an exceedingly stiff, awkward, jerking, and rectangular manner. Now, all this is the result either of inability in Maelzel to do better, or of intentional neglect—accidental neglect being out of the question, when we consider that the whole time of the ingenious proprietor is occupied in the improvement of his machines. Most assuredly we must not refer the unlife-like appearances to inability—for all the rest of Maelzel's automata are evidence of his full ability to copy the notions and peculiari-

ties of life with the most wonderful exactitude. The rope-dancers, for example, are inimitable. When the clown laughs, his lips, his eyes, his eyebrows, and eyelids—indeed, all the features of his countenance—are imbued with their appropriate expressions. In both him and his companion, every gesture is so entirely easy, and free from the semblance of artificiality, that, were it not for the diminutiveness of their size, and the fact of their being passed from one spectator to another previous to their exhibition on the rope, it would be difficult to convince any assemblage of persons that these wooden automata were not living creatures. We cannot, therefore, doubt Mr. Maelzel's ability, and we must necessarily suppose that he intentionally suffered his Chess-Player to remain the same artificial and unnatural figure which Baron Kempelen (no doubt also through design) originally made it. What this design was it is not difficult to conceive. Were the Automaton life-like in its motions, the spectator would be more apt to attribute its operations to their true cause (that is, to human agency within), than he is now, when the awkward and rectangular manœuvres convey the idea of pure and unaided mechanism.

7. When, a short time previous to the commencement of the game, the Automaton is wound up by the exhibitor as usual, an ear in any degree accustomed to the sounds produced in winding up a system of machinery, will not fail to dis-

cover, instantaneously, that the axis turned by the key in the box of the Chess-Player, cannot possibly be connected with either a weight, a spring, or any system of machinery whatever. The inference here is the same as in our last observation. The winding up is inessential to the operations of the Automaton, and is performed with the design of exciting in the spectators the false idea of mechanism.

8. When the question is demanded explicitly of Maelzel: "Is the Automaton a pure machine or not?" his reply is invariably the same: "I will say nothing about it." Now the notoriety of the Automaton, and the great curiosity it has everywhere excited, are owing more especially to the prevalent opinion that it is a pure machine, than to any other circumstance. Of course, then, it is the interest of the proprietor to represent it as a pure machine. And what more obvious, and more effectual method could there be of impressing the spectators with this desired idea, than a positive and explicit declaration to that effect? On the other hand, what more obvious and effectual method could there be of exciting a disbelief in the Automaton's being a pure machine, than by withholding such explicit declaration? For, people will naturally reason thus: It is Maelzel's interest to represent this thing a pure machine; he refuses to do so, directly, in words, although he does not scruple and is evidently anxious to do so indirectly, by actions; were it actually what

he wishes to represent it by actions, he would gladly avail himself of the more direct testimony of words; the inference is, that the consciousness of its *not* being a pure machine, is the reason of his silence; his actions cannot implicate him in a falsehood, his words may.

9. When, in exhibiting the interior of the box, Maelzel has thrown open the door No. 1, and also the door immediately behind it, he holds a lighted candle at the back door (as before mentioned) and moves the entire machine to and fro with a view of convincing the company that the cupboard No. 1 is entirely filled with machinery. When the machine is thus moved about, it will be apparent to any careful observer, that, whereas that portion of the machinery near the front door No. 1, is perfectly steady and unwavering, the portion farther within fluctuates, in a very slight degree, with the movements of the machine. This circumstance first aroused in us the suspicion that the more remote portion of the machinery was so arranged as to be easily slipped, *en masse*, from its position when occasion should require it. This occasion we have already stated to occur when the man concealed within brings his body into an erect position upon the closing of the back door.

10. Sir David Brewster states the figure of the Turk to be of the size of life—but in fact it is far above the ordinary size. Nothing is more easy than to err in our notions of magnitude. The body of the Automaton is generally insulated, and, having no means of immediately comparing

it with any human form, we suffer ourselves to consider is as of ordinary dimensions. This mistake may, however, be corrected by observing the Chess-Player when, as is sometimes the case, the exhibitor approaches it. Mr. Maelzel, to be sure, is not very tall, but upon drawing near the machine his head will be found at least eighteen inches below the head of the Turk, although the latter, it will be remembered, is in a sitting position.

11. The box, behind which the Automaton is placed, is precisely three feet six inches long, two feet four inches deep, and two feet six inches high. These dimensions are fully sufficient for the accommodation of a man very much above the common size—and the main compartment alone is capable of holding any ordinary man in the position we have mentioned as assumed by the person concealed. As these are facts, which any one who doubts them may prove by actual calculation, we deem it unnecessary to dwell upon them. We will only suggest that, although the top of the box is apparently a board of about three inches in thickness, the spectator may satisfy himself, by stooping and looking up at it when the main compartment is open, that it is in reality very thin. The height of the drawer also will be misconceived by those who examine it in a cursory manner. There is a space of about three inches between the top of the drawer as seen from the exterior, and the bottom of the cupboard—a space which must be included in the height of the drawer. These contrivances to

make the room within the box appear less than it actually is, are referable to a design on the part of the inventor, to impress the company again with a false idea, viz., that no human being can be accommodated within the box.

12. The interior of the main compartment is lined throughout with *cloth*. This cloth we suppose to have a twofold object. A portion of it may form, when tightly stretched, the only partitions which there is any necessity for removing during the changes of the man's position, viz.: the partition between the rear of the main compartment and the rear of cupboard No. 1, and the partition between the main compartment and the space behind the drawer when open. If we imagine this to be the case, the difficulty of shifting the partitions vanishes at once, if indeed any such difficulty could be supposed under any circumstances to exist. The second object of the cloth is to deaden and render indistinct all sounds occasioned by the movements of the person within.

13. The antagonist (as we have before observed) is not suffered to play at the board of the Automaton, but is seated at some distance from the machine. The reason which, most probably, would be assigned for this circumstance, if the question were demanded, is, that were the antagonist otherwise situated, his person would intervene between the machine and the spectators, and preclude the latter from a distinct view. But this difficulty might be easily obviated, either by elevating the seats of the company, or

by turning the end of the box toward them during the game. The true cause of the restriction is, perhaps, very different. Were the antagonist seated in contact with the box, the secret would be liable to discovery, by his detecting, with the aid of a quick ear, the breathings of the man concealed.

14. Although M. Maelzel, in disclosing the interior of the machine, sometimes, slightly deviates from the *routine* which we have pointed out, yet *never* in any instance does he *so* deviate from it as to interfere with our solution. For example, he has been known to open, first of all, the drawer—but he never opens the main compartment without first closing the back door of cupboard No. 1—he never opens the main compartment without first pulling out the drawer—he never shuts the drawer without first shutting the main compartment—he never opens the back door of cupboard No. 1 while the main compartment is open—and the game of chess is never commenced until the whole machine is closed. Now, if it were observed that *never, in any single instance*, did M. Maelzel differ from the routine we have pointed out as necessary to our solution, it would be one of the strongest possible arguments in corroboration of it; but the argument becomes infinitely strengthened if we duly consider the circumstance that he *does occasionally* deviate from the routine, but never does *so* deviate as to falsify the solution.

15. There are six candles on the board of the Automaton during exhibition. The question

naturally arises: "Why are so many employed, when a single candle, or, at farthest, two, would have been amply sufficient to afford the spectators a clear view of the board, in a room otherwise so well lit up as the exhibition room always is—when, moreover, if we suppose the machine a *pure machine,* there can be no necessity for so much light, or indeed any light at all, to enable *it* to perform its operations—and when, especially, only a single candle is placed upon the table of the antagonist?" The first and most obvious inference is, that so strong a light is requisite to enable the man within to see through the transparent material (probably fine gauze) of which the breast of the Turk is composed. But when we consider the *arrangement* of the candles, another reason immediately presents itself. There are six lights (as we have said before) in all. Three of these are on each side of the figure. Those most remote from the spectators are the longest—those in the middle are about two inches shorter—and those nearest the company about two inches shorter still—and the candles on one side differ in height from the candles respectively opposite on the other, by a ratio different from two inches—that is to say, the longest candle on one side is about three inches shorter than the longest candle on the other, and so on. Thus it will be seen that no two of the candles are of the same height, and thus also the difficulty of ascertaining the *material* of the breast of the figure (against which the light is especially directed) is greatly augmented by the dazzling effect of the complicated crossings of the rays—crossings which are brought about by placing the centres of radiation all upon different levels.

16. While the Chess-Player was in possession of Baron Kempelen, it was more than once observed, first, that an Italian in the suite of the Baron was never visible during the playing of a game of chess by the Turk; and, secondly, that the Italian being taken seriously ill, the exhibition was suspended until his recovery. This Italian professed a *total* ignorance of the game of chess, although all others of the suite played well. Similar observations have been made since the Automaton has been purchased by Maelzel. There is a man, *Schlumberger,* who attends him wherever he goes, but who has no ostensible occupation other than that of assisting in the packing and unpacking of the Automaton. This man is about the medium size, and has a remarkable stoop in the shoulders. Whether he professes to play chess or not, we are not informed. It is quite certain, however, that he is never to be seen during the exhibition of the Chess-Player, although frequently visible just before and just after the exhibition. Moreover, some years ago Maelzel visited Richmond with his automata, and exhibited them, we believe, in the house now occupied by M. Bossieux as a dancing academy. *Schlumberger* was suddenly taken ill, and during his illness there was no exhibition of the Chess-Player. These facts are well known to many of our citizens. The reason assigned for the suspension of the Chess-Player's perform-

ances was *not* the illness of *Schlumberger.* The inferences from all this we leave, without farther comment, to the reader.

17. The Turk plays with his *left* arm. A circumstance so remarkable cannot be accidental. Brewster takes no notice of it whatever, beyond a mere statement, we believe, that such is the fact. The early writers of treatises on the Automaton seem not to have observed the matter at all, and have no reference to it. The author of the pamphlet alluded to by Brewster mentions it, but acknowledges his inability to account for it. Yet it is obviously from such prominent discrepancies or incongruities as this that deductions are to be made (if made at all) which shall lead us to the truth.

The circumstance of the Automaton's playing with his left hand cannot have connection with the operations of the machine, considered merely as such. Any mechanical arrangement which would cause the figure to move, in any given manner, the left arm, could, if reversed, cause it to move, in the same manner, the right. But these principles cannot be extended to the human organization, wherein there is a marked and radical difference in the construction, and, at all events, in the powers, of the right and left arms. Reflecting upon this latter fact, we naturally refer the incongruity noticeable in the Chess-Player to this peculiarity in the human organization. If so, we must imagine some *reversion*—for the Chess-Player plays precisely as a man *would not.* These ideas, once entertained, are sufficient of themselves, to suggest the notion of a man in the interior. A few more imperceptible steps lead us, finally, to the result. The Automaton plays with his left arm, because under no other circumstances could the man within play with his right—a *desideratum* of course. Let us, for example, imagine the Automaton to play with his right arm. To reach the machinery which moves the arm, and which we have before explained to lie just beneath the shoulder, it would be necessary for the man within either to use his right arm in an exceedingly painful and awkward position (viz., brought up close to his body and tightly compressed between his body and the side of the Automaton), or else to use his left arm brought across his breast. In neither case could he act with the requisite ease of precision. On the contrary, the Automaton playing, as it actually does, with the left arm, all difficulties vanish. The right arm of the man within is brought across his breast, and his right fingers act, without any constraint, upon the machinery in the shoulder of the figure.

We do not believe that any reasonable objections can be urged against this solution of the Automaton Chess-Player.

# HOW TO WRITE A BLACKWOOD ARTICLE

[Published in *The American Museum*, December, 1838.]

"In the name of the Prophet—figs ! !"
—*Cry of Turkish fig-pedlar.*

I PRESUME everybody has heard of me. My name is the Signora Psyche Zenobia. This I know to be a fact. Nobody but my enemies ever calls me Suky Snobbs. I have been assured that Suky is but a vulgar corruption of Psyche, which is good Greek, and means "the soul" (that's me, I'm *all* soul) and sometimes "a butterfly," which latter meaning undoubtedly alludes to my appearance in my new crimson satin dress, with the sky-blue Arabian *mantelet,* and the trimmings of green *agraffas,* and the seven flounces of orange-colored *auriculas.* As for Snobbs—any person who should look at me would be instantly aware that my name wasn't Snobbs. Miss Tabitha Turnip propagated that report through sheer envy. Tabitha Turnip indeed! Oh the little wretch! But what can we expect from a turnip? Wonder if she remembers the old adage about "blood out of a turnip," etc.; [Mem: put her in mind of it the first opportunity]. [Mem again—pull her nose.] Where was I? Ah! I have been assured that Snobbs is a mere corruption of Zenobia, and that Zenobia was a queen—(So am I. Dr. Moneypenny always calls me the Queen of Hearts)—and that Zenobia, as well as Psyche, is good Greek, and that my father was "a Greek," and that consequently I have a right to our patronymic, which is Zenobia, and not by any means Snobbs. Nobody but Tabitha Turnip calls me Suky Snobbs. I am the Signora Psyche Zenobia.

As I said before, everybody has heard of me. I am that very Signora Psyche Zenobia, so justly celebrated as corresponding secretary to the "*Philadelphia, Regular, Exchange, Tea, Total, Young, Belles, Lettres, Universal, Experimental, Bibliographical, Association, To, Civilize, Humanity.*" Dr. Moneypenny made the title for us, and says he chose it because it sounded big like an empty rum-puncheon. (A vulgar man that sometimes—but he's deep.) We all sign the initials of the society after our names, in the fashion of the R. S. A., Royal Society of Arts—the S. D. U. K., Society for the Diffusion of Useful Knowledge, etc., etc. Dr. Moneypenny says the S. stands for *stale,* and the D. U. K. spells duck, (but it don't,) that that S. D. U. K. stands for Stale Duck, and not for Lord Brougham's society—but then Dr. Moneypenny is such a queer man that I am never sure when he is telling me the truth. At any rate we always add to our names the initials P. R. E. T. T. Y. B. L. U. E. B. A. T. C. H.—that is to say, Philadelphia, Regular, Exchange, Tea, Total, Young, Belles, Lettres, Universal, Experimental, Bibliographical, Association, To, Civilize, Humanity—one letter for each word, which is a decided improvement upon Lord Brougham. Dr. Moneypenny will have it that our initials give our true character—but for my life I can't see what he means.

Notwithstanding the good offices of the Doctor, and the strenuous exertions of the association to get itself into notice, it met with no very great success until I joined it. The truth is, the members indulged in too flippant a tone of discussion. The papers read every Saturday evening were characterized less by depth than buffoonery. They were all whipped syllabub. There was no investigation of first causes, first principles. There was no investigation of any thing at all. There was no attention paid to that great point, the "fitness of things." In short there was no fine writing like this. It was all low—very! No profundity, no reading, no metaphysics—nothing which the learned call spirituality, and which the unlearned choose to stigmatize as cant. [Dr. M. says I ought to spell "cant" with a capital K—but I know better.]

When I joined the society it was my endeavor to introduce a better style of thinking and writing, and all the world knows how well I have succeeded. We get up as good papers now in the P. R. E. T. T. Y. B. L. U. E. B. A. T. C. H. as any to be found even in Blackwood. I say Blackwood, because I have been assured that the finest writing, upon every subject, is to be discovered in the pages of that justly celebrated Magazine. We now take it for our model upon all themes, and are getting into rapid notice accordingly. And, after all, it's not so very difficult a matter to compose an article of the genuine Blackwood stamp, if one only goes properly about it. Of course I don't speak of the political articles. Everybody knows how *they* are managed, since Dr. Moneypenny explained it. Mr. Blackwood has a pair of tailor's-shears, and three apprentices who stand by him for orders. One hands him the *Times,* another the *Examiner* and a third a "Gulley's New Compendium of Slang-Whang." Mr. B. merely cuts out and intersperses. It is soon done—nothing but *Examiner,* "Slang-Whang," and *Times*—then *Times,* "Slang-Whang," and *Examiner*—and then *Times, Examiner.* and "Slang-Whang."

But the chief merit of the Magazine lies in its miscellaneous articles; and the best of these come under the head of what Dr. Moneypenny calls the *bizarreries* (whatever that may mean) and what everybody else calls the *intensities.* This is a species of writing which I have long known how to appreciate, although it is only since my late visit to Mr. Blackwood (deputed by the society) that I have been made aware of the exact method of composition. This method is very simple, but not so much so as the politics. Upon my calling at Mr. B.'s, and making known to him the wishes of the society, he received me with great civility, took me into his study, and gave me a clear explanation of the whole process.

"My dear madam," said he, evidently struck with my majestic appearance, for I had on the crimson satin, with the green *agraffas*, and orange-colored *auriculas*. "My *dear* madam," said he, "sit down. The matter stands thus: In the first place your writer of intensities must have very black ink, and a very big pen, with a very blunt nib. And, mark me, Miss Psyche Zenobia!" he continued, after a pause, with the most expressive energy and solemnity of manner, "mark me!—*that pen—must—never be mended!* Herein, madam, lies the secret, the soul, of intensity. I assume upon myself to say, that no individual, of however great genius, ever wrote with a good pen,—understand me,—a good article. You may take it for granted, that when manuscript can be read it is never worth reading. This is a leading principle in our faith, to which if you cannot readily assent, our conference is at an end."

He paused. But, of course, as I had no wish to put an end to the conference, I assented to a proposition so very obvious, and one, too, of whose truth I had all along been sufficiently aware. He seemed pleased, and went on with his instructions.

"It may appear invidious in me, Miss Psyche Zenobia, to refer you to an article, or set of articles, in the way of model or study; yet perhaps I may as well call your attention to a few cases. Let me see. There was 'The Dead Alive,' a capital thing!—the record of a gentleman's sensations when entombed before the breath was out of his body—full of tastes, terror, sentiment, metaphysics, and erudition. You would have sworn that the writer had been born and brought up in the coffin. Then we had the 'Confessions of an Opium-eater'—fine, very fine! —glorious imagination—deep philosophy—acute speculation—plenty of fire and fury, and a good spicing of the decidedly unintelligible. That was a nice bit of flummery, and went down the throats of the people delightfully. They would have it that Coleridge wrote the paper—but not so. It was composed by my pet baboon, Juniper, over a rummer of Hollands and water, 'hot, without sugar.'" [This I could scarcely have believed had it been any body but Mr. Blackwood, who assured me of it.] "Then there was 'The Involuntary Experimentalist,' all about a gentleman who got baked in an oven, and came out alive and well, although certainly done to a turn. And then there was 'The Diary of a Late Physician,' where the merit lay in good rant, and indifferent Greek—both of them taking things with the public. And then there was 'The Man in the Bell,' a paper by-the-by, Miss Zenobia, which I cannot sufficiently recommend to your attention. It is the history of a young person who goes to sleep under the clapper of a church bell, and is awakened by its tolling for a funeral. The sound drives him mad, and, accordingly, pulling out his tablets, he gives a record of his sensations. Sensations are the great things after all. Should you ever be drowned or hung, be sure and make a note of your sensations—they will be worth to you ten guineas a sheet. If you wish to write forcibly, Miss Zenobia, pay minute attention to the sensations."

"That I certainly will, Mr. Blackwood," said I.

"Good!" he replied. "I see you are a pupil after my own heart. But I must put you *au fait* to the details necessary in composing what may be denominated a genuine Blackwood article of the sensation stamp—the kind which you will understand me to say I consider the best for all purposes.

"The first thing requisite is to get yourself into such a scrape as no one ever got into before. The oven, for instance,—that was a good hit. But if you have no oven or big bell, at hand, and if you cannot conveniently tumble out of a balloon, or be swallowed up in an earthquake, or get stuck fast in a chimney, you will have to be contented with simply imagining some similar misadventure. I should prefer, however, that you have the actual fact to bear you out. Nothing so well assists the fancy, as an experimental knowledge of the matter in hand. 'Truth is strange,' you know, 'stranger than fiction'—besides being more to the purpose."

Here I assured him I had an excellent pair of garters, and would go and hang myself forthwith.

"Good!" he replied, "do so;—although hanging is somewhat hackneyed. Perhaps you might do better. Take a dose of Brandreth's pills, and then give us your sensations. However, my instructions will apply equally well to any variety of misadventure, and in your way home you may easily get knocked in the head, or run over by an omnibus, or bitten by a mad dog, or drowned in a gutter. But to proceed.

"Having determined upon your subject, you must next consider the tone, or manner, of your narration. There is the tone didactic, the tone enthusiastic, the tone natural—all commonplace enough. But then there is the tone laconic, or curt, which has lately come much into use. It consists in short sentences. Somehow thus: Can't be too brief. Can't be too snappish. Always a full stop. And never a paragraph.

"Then there is the tone elevated, diffusive, and interjectional. Some of our best novelists patronize this tone. The words must be all in a whirl, like a humming-top, and make a noise very similar, which answers remarkably well instead of meaning. This is the best of all possible styles where the writer is in too great a hurry to think.

"The tone metaphysical is also a good one. If you know any big words this is your chance for them. Talk of the Ionic and Eleatic schools—of Archytas, Gorgias, and Alcmæon. Say something about objectivity and subjectivity. Be sure and abuse a man named Locke. Turn up your nose at things in general, and when you let slip any thing a little *too* absurd, you need not be at the trouble of scratching it out, but just add a foot-note and say that you are indebted for the above profound observation to the '*Kritik der reinem Vernunft,*' or to the '*Metaphysische Anfangsgründe der Naturwissenchaft.*' This would look erudite and—and—and frank.

"There are various other tones of equal celebrity, but I shall mention only two more—the tone transcendental and the tone heterogeneous. In the former the merit consists in seeing into the nature of affairs a very great deal farther than anybody else. This second sight is very efficient when properly managed. A little reading of the *Dial* will carry you a great way. Eschew, in this case, big words; get them as small as possible, and write them upside down. Look over Channing's poems and quote what he says about a 'fat little man with a delusive show of Can.' Put in something about the Supernal Oneness. Don't say a syllable about the Infernal Twoness. Above all, study innuendo. Hint everything—assert nothing. If you feel inclined to say 'bread and butter,' do not by any means say it outright. You may say any thing and every thing *approaching* to 'bread and butter.' You may hint at buck-wheat cake, or you may even go so far as to insinuate oat-meal porridge, but if bread and butter be your real meaning, be cautious, my *dear* Miss Psyche, not on any account to say 'bread and butter!' "

I assured him that I should never say it again as long as I lived. He kissed me and continued:

"As for the tone heterogeneous, it is merely a judicious mixture, in equal proportions, of all the other tones in the world, and is consequently made up of every thing deep, great, odd, piquant, pertinent, and pretty.

"Let us suppose now you have determined upon your incidents and tone. The most important portion—in fact, the soul of the whole business, is yet to be attended to,—I allude to *the filling up*. It is not to be supposed that a lady, or gentleman either, has been leading the life of a book-worm. And yet above all things it is necessary that your article have an air of erudition, or at least afford evidence of extensive general reading. Now I'll put you in the way of accomplishing this point. See here!" (pulling down some three or four ordinary-looking volumes, and opening them at random). "By casting your eye down almost any page of any book in the world, you will be able to perceive at once a host of little scraps of either learning or *bel-esprit-ism,* which are the very thing for the spicing of a Blackwood article. You might as well note down a few while I read them to you. I shall make two divisions: first, *Piquant Facts for the Manufacture of Similes;* and, secondly, *Piquant Expressions to be introduced as occasion may require.* Write now!—" and I wrote as he dictated.

"PIQUANT FACTS FOR SIMILES. 'There were originally but three Muses—Melete, Mneme, Aœde—meditation, memory, and singing.' You may make a good deal of that little fact if properly worked. You see it is not generally known, and looks *recherché*. You must be careful and give the thing with a downright improviso air.

"Again. 'The river Alpheus passed beneath the sea, and emerged without injury to the purity of its waters.' Rather stale that, to be sure, but, if properly dressed and dished up, will look quite as fresh as ever.

"Here is something better. 'The Persian Iris appears to some persons to possess a sweet and very powerful perfume, while to others it is perfectly scentless.' Fine that, and very delicate! Turn it about a little, and it will do wonders. We 'll have some thing else in the botanical line. There's nothing goes down so well, especially with the help of a little Latin. Write!

"'*The Epidendrum Flos Aeris,* of Java, bears a very beautiful flower, and will live when pulled up by the roots. The natives suspend it by a cord from the ceiling, and enjoy its fragrance for years.' That's capital! That will do for the similes. Now for the Piquant Expressions.

"PIQUANT EXPRESSIONS. '*The Venerable Chinese novel Ju-Kiao-Li.*' Good! By introducing these few words with dexterity you will evince your intimate acquaintance with the language and literature of the Chinese. With the aid of this you may possibly get along without either Arabic, or Sanscrit, or Chickasaw. There is no passing muster, however, without Spanish, Italian, German, Latin, and Greek. I must look you out a little specimen of each. Any scrap will answer, because you must depend upon your own ingenuity to make it fit into your article. Now write!

"'*Aussi tendre que Zaïre*'—as tender as Zaire—French. Alludes to the frequent repetition of the phrase, *la tendre Zaïre,* in the French tragedy of that name. Properly introduced, will show not only your knowledge of the language, but your general reading and wit. You can say, for instance, that the chicken you were eating (write an article about being choked to death by a chicken-bone) was not altogether *aussi tendre que Zaïre.* Write!

"'*Ven muerte tan escondida,*
*Que no te sienta venir,*
*Porque el plazer del morir,*
*No me torne á dar la vida.*'

"That's Spanish—from Miguel de Cervantes. 'Come quickly, O death! but be sure and don't let me see you coming, lest the pleasure I shall feel at your appearance should unfortunately bring me back again to life.' This you may slip in quite *à propos* when you are struggling in the last agonies with the chicken-bone. Write!

"'*Il pover' huomo che non sen' era accorto,*
*Andava combattendo, e era morto.*'

That 's Italian, you perceive—from Ariosto. It means that a great hero, in the heat of combat, not perceiving that he had been fairly killed, continued to fight valiantly, dead as he was. The application of this to your own case is obvious—for I trust, Miss Psyche, that you will not neglect to kick for at least an hour and a half after you have been choked to death by that chicken-bone. Please to write!

"' *Und sterb' ich doch, no sterb' ich denn*
*Durch sie—durch sie!*'

That 's German—from Schiller. 'And if I die, at least I die—for thee—for thee!' Here it is clear that you are apostrophizing the *cause* of your disaster, the chicken. Indeed what gentleman (or lady either) of sense, *would n't* die, I should like to know, for a well fattened capon of the right Molucca breed, stuffed with capers and mushrooms, and served up in a salad-bowl, with orange-jellies *en mosaïques.* Write! (You can get them that way at Tortoni 's,)—Write, if you please!

"Here is a nice little Latin phrase, and rare too, (one can 't be too *recherché* or brief in one's Latin, it's getting so common,—*ignoratio elenchi.* He has committed an *ignoratio elenchi*—that is to say, he has understood the words of your proposition, but not the idea. The man was a *fool,* you see. Some poor fellow whom you address while choking with that chicken-bone, and who therefore didn't precisely understand what you were talking about. Throw the *ignoratio elenchi* in his teeth, and, at once, you have him annihilated. If he dares to reply, you can tell him from Lucan (here it is) that speeches are mere *anemonae verborum,* anemone words. The anemone, with great brilliancy, has no smell. Or, if he begins to bluster, you may be down upon him with *insomnia Jovis,* reveries of Jupiter—a phrase which Silius Italicus (see here!) applies to thoughts pompous and inflated. This will be sure and cut him to the heart. He can do nothing but roll over and die. Will you be kind enough to write?

"In Greek we must have some thing pretty—from Demosthenes, for example. ’Ανὴρ ὁ φεύγων καὶ πάλιν μαχήσεται. [Aner o pheugon kai palin makesetai.] There is a tolerably good translation of it in Hudibras—

"'For he that flies may fight again,
Which he can never do that 's slain.'

In a Blackwood article nothing makes so fine a show as your Greek. The very letters have an air of profundity about them. Only observe, madam, the astute look of that Epsilon! That Phi ought certainly to be a bishop! Was ever there a smarter fellow than that Omicron? Just twig that Tau! In short, there is nothing like Greek for a genuine sensation-paper. In the present case your application is the most obvious thing in the world. Rap out the sentence with a huge oath and by way of *ultimatum* at the good-for-nothing dunder-headed villain who couldn't understand your plain English in relation to the chicken-bone. He'll take the hint and be off, you may depend upon it."

These were all the instructions Mr. B. could afford me upon the topic in question, but I felt they would be entirely sufficient. I was, at length, able to write a genuine Blackwood article, and determined to do it forthwith. In taking leave of me, Mr. B. made a proposition for the purchase of the paper when written; but as he could offer me only fifty guineas a sheet, I thought it better to let our society have it, than sacrifice it for so paltry a sum. Notwithstanding this niggardly spirit, however, the gentleman showed his consideration for me in all other respects, and indeed treated me with the greatest civility. His parting words made a deep impression upon my heart, and I hope I shall always remember them with gratitude.

"My dear Miss Zenobia," he said, while the tears stood in his eyes, "is there *any* thing else I can do to promote the success of your laudable undertaking? Let me reflect! It is just possible that you may not be able, so soon as convenient, to—to—get yourself drowned, or—choked with a chicken-bone, or—or hung,—or—bitten by a—but stay! Now I think me of it, there are a couple of very excellent bull-dogs in the yard—fine fellows, I assure you—savage, and all that—indeed just the thing for your money—they'll have you eaten up, *auriculas* and all, in less than five minutes (here's my watch!) —and then only think of the sensations! Here! I say—Tom!—Peter!—Dick, you villain!—let out those"—but as I was really in a great hurry, and had not another moment to spare, I was reluctantly forced to expedite my departure, and accordingly took leave *at once*—somewhat more abruptly, I admit, than strict courtesy would have otherwise allowed.

It was my primary object upon quitting Mr. Blackwood, to get into some immediate difficulty, pursuant to his advice, and with this view I spent the greater part of the day in wandering about Edinburgh, seeking for desperate adventures—adventures adequate to the intensity of my feelings, and adapted to the vast character of the article I intended to write. In this excursion I was attended by one negro-servant, Pompey, and my little lap-dog Diana, whom I had brought with me from Philadelphia. It was not, however, until late in the afternoon that I fully succeeded in my arduous undertaking. An important event then happened of which the following Blackwood article, in the tone heterogeneous, is the substance and result.

NOTE.—See also "Loss of Breath," vol. VIII., present edition.—EDITOR.

# A PREDICAMENT

[Published in the *American Museum*, December, 1838, under the title of "The Scythe of Time."]

What chance, good lady, hath bereft you thus?—Comus.

It was a quiet and still afternoon when I strolled forth in the goodly city of Edina. The confusion and bustle in the streets were terrible. Men were talking. Women were screaming. Children were choking. Pigs were whistling. Carts they rattled. Bulls they bellowed. Cows they lowed. Horses they neighed. Cats they caterwauled. Dogs they danced. *Danced!* Could it then be possible? *Danced!* Alas, thought I, *my* dancing days are over! Thus it is ever. What a host of gloomy recollections will ever and anon be awakened in the mind of genius and imaginative contemplation, especially of a genius doomed to the everlasting, and eternal, and continual, and, as one might say, the—*continued*—yes, the *continued and continuous*, bitter, harassing, disturbing, and, if I may be allowed the expression, the *very* disturbing influence of the serene, and god-like, and heavenly, and exalting, and elevated, and purifying effect of what may be rightly termed the most enviable, the most *truly* enviable—nay! the most benignly beautiful, the most deliciously ethereal, and, as it were, the most *pretty* (if I may use so bold an expression) *thing* (pardon me, gentle reader!) in the world—but I am always led away by my feelings. In *such* a mind, I repeat, what a host of recollections are stirred up by a trifle! The dogs danced! *I*—I *could* not! They frisked—I wept. They capered—I sobbed aloud. Touching circumstances! which cannot fail to bring to the recollection of the classical reader that exquisite passage in relation to the fitness of things, which is to be found in the commencement of the third volume of that admirable and venerable Chinese novel the *Jo-Go-Slow*.

In my solitary walk through the city I had two humble but faithful companions. Diana, my poodle! sweetest of creatures! She had a quantity of hair over her one eye, and a blue riband tied fashionably around her neck. Diana was not more than five inches in height, but her head was somewhat bigger than her body, and her tail being cut off exceedingly close, gave an air of injured innocence to the interesting animal which rendered her a favorite with all.

And Pompey, my negro!—sweet Pompey, how shall I ever forget thee? I had taken Pompey's arm. He was three feet in height (I like to be particular) and about seventy, or perhaps eighty, years of age. He had bow-legs and was corpulent. His mouth could not be called small, nor his ears short. His teeth, however, were like pearl, and his large full eyes were deliciously white. Nature had endowed him with no neck, and had placed his ankles (as usual with that race) in the middle of the upper portion of the feet. He was clad with a striking simplicity. His sole garments were a stock of nine inches in height, and a nearly-new drab overcoat which had formerly been in the service of the tall, stately, and illustrious Dr. Moneypenny. It was a good overcoat. It was well cut. It was well made. The coat was nearly new. Pompey held it up out of the dirt with both hands.

There were three persons in our party, and two of them have already been the subject of remark. There was a third—that person was myself. I am the Signora Psyche Zenobia. I am *not* Suky Snobbs. My appearance is commanding. On the memorable occasion of which I speak I was habited in a crimson satin dress, with a sky-blue Arabian mantelet. And the dress had trimmings of green agraffas, and seven graceful flounces of the orange colored auricula. I thus formed the third of the party. There was the poodle. There was Pompey. There was myself. We were *three.* Thus it is said there were originally but three Furies—Melty, Nimmy, and Hetty—Meditation, Memory, and Fiddling.

Leaning upon the arm of the gallant Pompey, and attended at a respectable distance by Diana, I proceeded down one of the populous and very pleasant streets of the now deserted Edina. On a sudden, there presented itself to view a church

—a Gothic cathedral—vast, venerable, and with a tall steeple, which towered into the sky. What madness now possessed me? Why did I rush upon my fate? I was seized with an uncontrollable desire to ascend the giddy pinnacle, and there survey the immense extent of the city. The door of the cathedral stood invitingly open. My destiny prevailed. I entered the ominous archway. Where then was my guardian angel?—if indeed such angels there be. *If!* Distressing monosyllable! what a world of mystery, and meaning, and doubt, and uncertainty is there involved in thy two letters! I entered the ominous archway! I entered; and, without injury to my orange-colored auriculas, I passed beneath the portal, and emerged within the vestibule. Thus it is said the immense river Alfred passed, unscathed, and unwetted, beneath the sea.

I thought the staircase would never have an end. *Round!* Yes, they went round and up, and round and up and round and up, until I could not help surmising, with the sagacious Pompey, upon whose supporting arm I leaned in all the confidence of early affection—I *could* not help surmising that the upper end of the continuous spiral ladder had been accidentally, or perhaps designedly, removed. I paused for breath; and, in the meantime, an accident occurred of too momentous a nature in a moral, and also in a metaphysical point of view, to be passed over without notice. It appeared to me—indeed I was quite confident of the fact—I could not be mistaken—no! I had, for some moments, carefully and anxiously observed the motions of my Diana—I say that *I could not be* mistaken—Diana *smelt a rat!* At once I called Pompey's attention to the subject, and he—he agreed with me. There was then no longer any reasonable room for doubt. The rat had been smelled—and by Diana. Heavens! shall I ever forget the intense excitement of the moment? The rat!—it was there—that is to say, it was somewhere. Diana smelled the rat. I—*I could* not! Thus it is said the Prussian Iris has, for some persons, a sweet and very powerful perfume, while to others it is perfectly scentless.

The staircase has been surmounted, and there were now only three or four more upward steps intervening between us and the summit. We still ascended, and now only one step remained. One step! One little, little step! Upon one such little step in the great staircase of human life how vast a sum of human happiness or misery depends! I thought of myself, then of Pompey, and then of the mysterious and inexplicable destiny which surrounded us. I thought of Pompey!—alas, I thought of love! I thought of my many false *steps* which have been taken, and may be taken again. I resolved to be more cautious, more reserved. I abandoned the arm of Pompey, and, without his assistance, surmounted the one remaining step, and gained the chamber of the belfry. I was followed immediately afterward by my poodle. Pompey alone remained behind. I stood at the head of the staircase, and encouraged him to ascend. He stretched forth to me his hand, and unfortunately in so doing was forced to abandon his firm hold upon the overcoat. Will the gods never cease their persecution? The overcoat is dropped, and, with one of his feet, Pompey stepped upon the long and trailing skirt of the overcoat. He stumbled and fell—this consequence was inevitable. He fell forward, and, with his accursed head, striking me full in the—in the breast, precipitated me headlong, together with himself, upon the hard, filthy, and detestable floor of the belfry. But my revenge was sure, sudden, and complete. Seizing him furiously by the wool with both hands, I tore out a vast quantity of black, and crisp, and curling material, and tossed it from me with every manifestation of disdain. It fell among the ropes of the belfry and remained. Pompey arose, and said no word. But he regarded me piteously with his large eyes [illegible]—sighed. Ye Gods—that sigh! It sunk into my heart. And the hair—the wool! Could I have reached that wool I would have bathed it with my tears, in testimony of regret. But alas! it was now far beyond my grasp. As it dangled among the cordage of the bell, I fancied it alive. I fancied that it stood on end with indignation. Thus the *happydandy Flos Aeris* of Java, bears, it is said, a beautiful flower, which will live when pulled up by the roots. The natives suspend it by a cord from the ceiling and enjoy its fragrance for years.

Our quarrel was now made up, and we looked about the room for an aperture through which to survey the city of Edina. Windows there were none. The sole light admitted into the gloomy chamber proceeded from a square opening, about a foot in diameter, at a height of about seven feet from the door. Yet what will the energy of true genius not effect? I resolved to clamber up to this hole. A vast quantity of wheels, pinions, and other cabalistic-looking machinery stood opposite the hole, close to it; and through the hole there passed an iron rod from the machinery. Between the wheels and the wall where the hole lay there was barely room for my body—yet I was desperate, and determined to persevere. I called Pompey to my side.

"You perceive that aperture, Pompey. I wish to look through it. You will stand here just beneath the hole—so. Now, hold out one of your hands, Pompey, and let me step upon it—thus. Now, the other hand, Pompey, and with its aid I will get upon your shoulders."

He did every thing I wished, and I found, upon getting up, that I could easily pass my head and neck through the aperture. The prospect was sublime. Nothing could be more magnificent. I merely paused a moment to bid Diana behave herself, and assure Pompey that I would be considerate and bear as lightly as possible upon his shoulders. I told him I would be tender of his feelings—*ossi tender que beefsteak*. Having done this justice to my faithful friend, I gave myself up with great zest and enthusiasm to the enjoyment of the scene which so obligingly spread itself out before my eyes.

Upon this subject, however, I shall forbear to dilate. I will not describe the city of Edinburgh. Every one has been to the city of Edinburgh. Every one has been to Edinburgh—the classic Edina. I will confine myself to the momentous details of my own lamentable adventure. Having, in some measure, satisfied my curiosity in regard to the extent, situation, and general appearance of the city, I had leisure to survey the church in which I was, and the delicate architecture of the steeple. I observed that the aperture through which I had thrust my head was an opening in the dial-plate of a gigantic clock, and must have appeared, from the street, as a large key-hole, such as we see in the face of the French watches. No doubt the true object was to admit the arm of an attendant, to adjust, when necessary, the hands of the clock from within. I observed also, with surprise, the immense size of these hands, the longest of which could not have been less than ten feet in length, and, where broadest, eight or nine inches in breadth. They were of solid steel apparently, and their edges appeared to be sharp. Having noticed these particulars, and some others, I again turned my eyes upon the glorious prospect below, and soon became absorbed in contemplation.

From this, after some minutes, I was aroused by the voice of Pompey, who declared that he could stand it no longer, and requested that I would be so kind as to come down. This was unreasonable, and I told him so in a speech of some length. He replied but with an evident misunderstanding of my ideas upon the subject. I accordingly grew angry, and told him in plain words, that he was a fool, that he had committed an *ignoramus e-clench-eye,* that his notions were mere *insommary Bovis,* and his words little better than *an ennemywerrybor'em.* With this he appeared satisfied, and I resumed my contemplations.

It might have been half an hour after this altercation when, as I was deeply absorbed in the heavenly scenery beneath me, I was startled by something very cold which pressed with a gentle pressure on the back of my neck. It is needless to say that I felt inexpressibly alarmed. I knew that Pompey was beneath my feet, and that Diana was sitting, according to my explicit directions, upon her hind legs, in the farthest corner of the room. What could it be? Alas! I but too soon discovered. Turning my head gently to one side, I perceived, to my extreme horror, that the huge, glittering, scimetar-like minute-hand of the clock had, in the course of its hourly revolution, *descended upon my neck.* There was, I knew, not a second to be lost. I pulled back at once—but it was too late. There was no chance of forcing my head through the mouth of that terrible trap in which it was so fairly caught, and which grew narrower and narrower with a rapidity too horrible to be conceived. The agony of that moment is not to be imagined. I threw up my hands and endeavored, with all my strength, to force upward the ponderous iron bar. I might as well have tried to lift the cathedral itself. Down, down, down it came, closer and yet closer. I screamed to Pompey for aid; but he said that I had hurt his feelings by calling him " an ignorant old squint-eye." I yelled to Diana; but she only said "bow-wow-wow," and that I had told her "on no account to stir from the corner." Thus I had no relief to expect from my associates.

Meantime the ponderous and terrific *Scythe of Time* (for I now discovered the literal import of that classical phrase) had not stopped, nor was it likely to stop, in its career. Down and still down, it came. It had already buried its sharp edge a full inch in my flesh, and my sensations grew indistinct and confused. At one time I fancied myself in Philadelphia with the stately Dr. Moneypenny, at another in the back parlor of Mr. Blackwood receiving his invaluable instructions. And then again the sweet recollection of better and earlier times came over me, and I thought of that happy period when the world was not all a desert, and Pompey not altogether cruel.

The ticking of the machinery amused me. *Amused me,* I say, for my sensations now bordered upon perfect happiness, and the most trifling circumstances afforded me pleasure. The *click-clack, click-clack, click-clack* of the clock was the most melodious of music in my ears, and occasionally even put me in mind of the graceful sermonic harangues of Dr. Ollapod. Then there were the great figures upon the dial-plate—how intelligent, how intellectual, they all looked!

And presently they took to dancing the Mazurka, and I think it was the figure V who performed the most to my satisfaction. She was evidently a lady of breeding. None of your swaggerers, and nothing at all indelicate in her motions. She did the pirouette to admiration—whirling round upon her apex. I made an endeavor to hand her a chair, for I saw that she appeared fatigued with her exertions—and it was not until then that I fully perceived my lamentable situation. Lamentable indeed! The bar had buried itself two inches in my neck. I was aroused to a sense of exquisite pain. I prayed for death, and, in the agony of the moment, could not help repeating those exquisite verses of the poet Miguel De Cervantes:

Vanny Buren, tan escondida
Query no te senty venny
Pork and pleasure, delly morry
Nommy, torny, darry, widdy!

But now a new horror presented itself, and one indeed sufficient to startle the strongest nerves. My eyes, from the cruel pressure of the machine, were absolutely starting from their sockets. While I was thinking how I should possibly manage without them, one actually tumbled out of my head, and, rolling down the steep side of the steeple, lodged in the rain gutter which ran along the eaves of the main building. The loss of the eye was not so much as the insolent air of independence and contempt with which it regarded me after it was out. There it lay in the gutter just under my nose, and the airs it gave itself would have been ridiculous had they not been disgusting. Such a winking and blinking were never before seen. This behavior on the part of my eye in the gutter was not only irritating on account of its manifest insolence and shameful ingratitude, but was also exceedingly inconvenient on account of the sympathy which always exists between two eyes of the same head, however far apart. I was forced, in a manner, to wink and to blink, whether I would or not, in exact concert with the scoundrelly thing that lay just under my nose. I was presently relieved, however, by the dropping out of the other eye. In falling it took the same direction (possibly a concerted plot) as its fellow. Both rolled out of the gutter together, and in truth I was very glad to get rid of them.

The bar was now four inches and a half deep in my neck, and there was only a little bit of skin to cut through. My sensations were those of entire happiness, for I felt that in a few minutes, at farthest, I should be relieved from my disagreeable situation. And in this expectation I was not at all deceived. At twenty-five minutes past five in the afternoon, precisely, the huge minute-hand had proceeded sufficiently far on its terrible revolution to sever the small remainder of my neck. I was not sorry to see the head which had occasioned me so much embarrassment at length make a final separation from my body. It first rolled down the side of the steeple, then lodged, for a few seconds, in the gutter, and then made its way, with a plunge, into the middle of the street.

I will candidly confess that my feelings were now the most singular—nay, of the most mysterious, the most perplexing and incomprehensible character. My senses were here and there at one and the same moment. With my head I imagined, at one time, that I the head, was the real Signora Psyche Zenobia—at another I felt convinced that myself, the body, was the proper identity. To clear my ideas on this topic I felt in my pocket for my snuff-box, but, upon getting it, and endeavoring to apply a pinch of its grateful contents in the ordinary manner, I became immediately aware of my peculiar deficiency, and threw the box at once down to my head. It took a pinch with great satisfaction, and smiled me an acknowledgement in return. Shortly afterward it made me a speech, which I could hear but indistinctly without ears. I gathered enough, however, to know that it was astonished at my wishing to remain alive under such circumstances. In the concluding sentences it quoted the noble words of Ariosto—

*Il pover hommy che non sera corty*
*And have a combat tenty erry morty;*

thus comparing me to the hero who, in the heat of the combat, not perceiving that he was dead, continued to contest the battle with inextinguishable valor. There was nothing now to prevent my getting down from my elevation, and I did so. What it was that Pompey saw so *very* peculiar in my appearance I have never yet been able to find out. The fellow opened his mouth from ear to ear, and shut his two eyes as if he were endeavoring to crack nuts between the lids. Finally, throwing off his overcoat, he made one spring for the staircase and disappeared. I hurled after the scoundrel these vehement words of Demosthenes—

*Andrew O'Phlegethon, you really make haste to fly.*

and then turned to the darling of my heart, to the one-eyed! the shaggy-haired Diana. Alas! what a horrible vision affronted my eyes? *Was* that a rat I saw skulking into his hole? *Are* these the picked bones of the little angel who has been cruelly devoured by the monster? Ye Gods! and what *do* I behold—*is* that the departed spirit, the shade, the ghost of my beloved puppy, which I perceive sitting with a grace so melancholy, in the corner? Harken! for she speaks, and, heavens! it is in the German of Schiller—

"Unt stubby duk, so stubby dun
Duk she! duk she!"

Alas! and are not her words too true?

And if I died at least I died
For thee—for thee.

Sweet creature! she *too* has sacrificed herself in my behalf. Dogless, niggerless, headless, what *now* remains for the unhappy Signora Psyche Zenobia? Alas—*nothing!* I have done.

# DIDDLING

## CONSIDERED AS ONE OF THE EXACT SCIENCES

[Published in the *Broadway Journal*, II., 10.]

Hey, diddle diddle,
The cat and the fiddle.

SINCE the world began there have been two Jeremys. The one wrote a Jeremiad about usury, and was called Jeremy Bentham. He has been much admired by Mr. John Neal, and was a great man in a small way. The other gave name to the most important of the Exact Sciences, and was a great man in a *great* way—I may say, indeed, in the very greatest of ways.

Diddling—or the abstract idea conveyed by the verb to diddle—is sufficiently well understood. Yet the fact, the deed, the thing, *diddling,* is somewhat difficult to define. We may get, however, at a tolerably distinct conception of the matter in hand, by defining—not the thing, diddling, in itself—but man, as an animal that diddles. Had Plato but hit upon this, he would have been spared the affront of the picked chicken.

Very pertinently it was demanded of Plato, why a picked chicken, which was clearly a "biped without feathers," was not, according to his own definition, a man? But I am not to be bothered by any similar query. Man is an animal that diddles, and there is *no* animal that diddles *but* man. It will take an entire hen-coop of picked chickens to get over that.

What constitutes the essence, the nare, the principle of diddling is, in fact, peculiar to the class of creatures that wear coats and pantaloons. A crow thieves; a fox cheats; a weasel outwits; a man diddles. To diddle is his destiny. "Man was made to mourn," says the poet. But not so:—he was made to diddle. This is his aim—his object—his *end.* And for this reason when a man's diddled we say he's *"done."*

Diddling, rightly considered, is a compound, of which the ingredients are minuteness, interest, perseverance, ingenuity, audacity, *nonchalance,* originality, impertinence, and *grin.*

*Minuteness:*—Your diddler is minute. His operations are upon a small scale. His business is retail, for cash, or approved paper at sight. Should he ever be tempted into magnificent speculation, he then, at once, loses his distinctive features, and becomes what we term "financier." This latter word conveys the diddling idea in every respect except that of magnitude. A diddler may thus be regarded as a banker *in petto*—a "financial operation," as a diddle at Brobdignag. The one is to the other, as Homer to

"Flaccus"—as a Mastodon to a mouse—as the tail of a comet to that of a pig.

*Interest:*—Your diddler is guided by self-interest. He scorns to diddle for the mere *sake* of the diddle. He has an object in view—his pocket—and yours. He regards always the main chance. He looks to Number One. You are Number Two, and must look to yourself.

*Perseverance:*—Your diddler perseveres. He is not readily discouraged. Should even the banks break, he cares nothing about it. He steadily pursues his end, and

*Ut canis a corio nunquam absterrebitur uncto,*

so he never lets go of his game.

*Ingenuity:*—Your diddler is ingenious. He has constructiveness large. He understands plot. He invents and circumvents. Were he not Alexander he would be Diogenes. Were he not a diddler, he would be a maker of patent rat-traps or an angler for trout.

*Audacity:*—Your diddler is audacious.—He is a bold man. He carries the war into Africa. He conquers all by assault. He would not fear the daggers of the Frey Herren. With a little more prudence Dick Turpin would have made a good diddler; with a trifle less blarney, Daniel O'Connell; with a pound or two more brains, Charles the Twelfth.

*Nonchalance:*—Your diddler is *nonchalant.* He is not at all nervous. He never *had* any nerves. He is never seduced into a flurry. He is never put out—unless put out of doors. He is cool—cool as a cucumber. He is calm—"calm as a smile from Lady Bury." He is easy—easy as an old glove, or the damsels of ancient Baiæ.

*Originality:*—Your diddler is original—conscientiously so. His thoughts are his own. He would scorn to employ those of another. A stale trick is his aversion. He would return a purse, I am sure, upon discovering that he had obtained it by an unoriginal diddle.

*Impertinence:*—Your diddler is impertinent. He swaggers. He sets his arms a-kimbo. He thrusts his hands in his trowsers' pocket. He sneers in your face. He treads on your corns. He eats your dinner, he drinks your wine, he borrows your money, he pulls your nose, he kicks your poodle, and he kisses your wife.

*Grin:*—Your *true* diddler winds up all with a grin. But this nobody sees but himself. He grins when his daily work is done—when his allotted labors are accomplished—at night in his own closet, and altogether for his own private entertainment. He goes home. He locks his door. He divests himself of his clothes. He puts out his candle. He gets into bed. He places his head upon the pillow. All this done, and your diddler *grins.* This is no hypothesis. It is a matter of course. I reason *a priori,* and a diddle would be *no* diddle without a grin.

The origin of the diddle is referrible to the infancy of the Human Race. Perhaps the first diddler was Adam. At all events, we can trace the science back to a very remote period of antiquity. The moderns, however, have brought it to a perfection never dreamed of by our thick-headed progenitors. Without pausing to speak of the "old saws," therefore, I shall content myself with a compendious account of some of the more "modern instances."

A very good diddle is this. A housekeeper in want of a sofa, for instance, is seen to go in and out of several cabinet warehouses. At length she arrives at one offering an excellent variety. She is accosted, and invited to enter, by a polite and voluble individual at the door. She finds a sofa well adapted to her views, and upon inquiring the price, is surprised and delighted to hear a sum named at least twenty per cent. lower than her expectations. She hastens to make the purchase, gets a bill and receipt, leaves her address, with a request that the article be sent home as speedily as possible, and retires amid a profusion of bows from the shop-keeper. The night arrives and no sofa. The next day passes, and still none. A servant is sent to make inquiry about the delay. The whole transaction is denied. No sofa has been sold—no money received—except by the diddler, who played shop-keeper for the nonce.

Our cabinet warehouses are left entirely unattended, and thus afford every facility for a trick of this kind. Visitors enter, look at furniture, and depart unheeded and unseen. Should any one wish to purchase, or to inquire the price of an article, a bell is at hand, and this is considered amply sufficient.

Again, quite a respectable diddle is this. A well-dressed individual enters a shop; makes a purchase to the value of a dollar; finds, much to his vexation, that he has left his pocket-book in another coat pocket; and so says to the shop-keeper—

"My dear sir, never mind!—just oblige me, will you, by sending the bundle home? But stay! I really believe that I have nothing less than a five dollar bill, even *there*. However, you can send four dollars in change *with* the bundle, you know."

"Very good, sir," replies the shop-keeper, who entertains, at once, a lofty opinion of the high-mindedness of his customer. "I know fellows," he says to himself, "who would just have put the goods under their arm, and walked off with a promise to call and pay the dollar as they came by in the afternoon."

A boy is sent with the parcel and change. On the route, quite accidentally, he is met by the purchaser, who exclaims:

"Ah! this is my bundle, I see—I thought you had been home with it, long ago. Well, go on! My wife, Mrs. Trotter, will give you the five dollars—I left instructions with her to that effect. The change you might as well give to *me*—I shall want some silver for the Post Office. Very good! One, two, is this a good quarter?—three, four—quite right! Say to Mrs. Trotter that you met me, and be sure now and *do* not loiter on the way."

The boy doesn't loiter at all—but he is a very long time in getting back from his errand—for no lady of the precise name of Mrs. Trotter is to be discovered. He consoles himself, however, that he has not been such a fool as to leave the goods without the money, and re-entering his shop with a self-satisfied air, feels sensibly hurt and indignant when his master asks him what has become of the change.

A very simple diddle, indeed, is this. The captain of a ship which is about to sail, is presented by an official looking person with an unusually moderate bill of city charges. Glad to get off so easily, and confused by a hundred duties pressing upon him all at once, he discharges the claim forthwith. In about fifteen minutes, another and less reasonable bill is handed him by one who soon makes it evident that the first collector was a diddler, and the original collection a diddle.

And here, too, is a somewhat similar thing. A steamboat is casting loose from the wharf. A traveller, portmanteau in hand, is discovered running toward the wharf, at full speed. Suddenly, he makes a dead halt, stoops, and picks up something from the ground in a very agitated manner. It is a pocket-book, and—"Has any gentleman lost a pocket-book?" he cries. No one can say that he has exactly lost a pocket-book; but a great excitement ensues, when the treasure trove is found to be of value. The boat, however, must not be detained.

"Time and tide wait for no man," says the captain.

"For God's sake, stay only a few minutes," says the finder of the book—"the true claimant will presently appear."

"Can't wait!" replies the man in authority; "cast off there, d'ye hear?"

"What *am* I to do?" asks the finder, in great tribulation. "I am about to leave the country for some years, and I cannot conscientiously retain this large amount in my possession. I beg your pardon, sir," [here he addresses a gentleman on shore,] "but you have the air of an honest man. *Will* you confer upon me the favor of taking charge of this pocket-book—I *know* I can trust you—and of advertising it? The notes, you see, amount to a very considerable sum. The owner will, no doubt, insist upon rewarding you for your trouble—"

"*Me!*—no, *you!*—it was *you* who found the book."

"Well, if you *must* have it so—*I* will take a small reward—just to satisfy your scruples. Let me see—why these notes are all hundreds—bless my soul! a hundred is too much to take—fifty would be quite enough, I am sure—"

"Cast off there!" says the captain.

"But then I have no change for a hundred, and upon the whole, *you* had better—"

"Cast off there!" says the captain.

"Never mind!" cries the gentleman on shore, who has been examining his own pocket-book for the last minute or so—"never mind! *I* can fix it—here is a fifty on the Bank of North America—throw me the book."

And the over-conscientious finder takes the fifty with marked reluctance, and throws the gentleman the book, as desired, while the steamboat fumes and fizzes on her way. In about half an hour after her departure, the "large amount" is seen to be a "counterfeit presentment," and the whole thing a capital diddle.

A bold diddle is this. A camp-meeting, or something similar, is to be held at a certain spot which is accessible only by means of a free bridge. A diddler stations himself upon this bridge, respectfully informs all passers by of the new county law, which establishes a toll of one cent for foot passengers, two for horses and donkeys, and so forth, and so forth. Some grumble, but all submit, and the diddler goes home a wealthier man by some fifty or sixty dollars well earned. This taking a toll from a great crowd of people is an excessively troublesome thing.

A neat diddle is this. A friend holds one of the diddler's promises to pay, filled up and signed in due form, upon the ordinary blanks printed in red ink. The diddler purchases one or two dozen of these blanks, and every day dips one of them in his soup, makes his dog jump for it, and finally gives it to him as a *bonne bouche*. The note arriving at maturity, the diddler, with the diddler's dog, calls upon the friend, and the promise to pay is made the topic of discussion. The friend produces it from his *escritoire*, and is in the act of reaching it to the diddler, when up jumps the diddler's dog and devours it forthwith. The diddler is not only surprised but vexed and incensed at the absurd behavior of his dog, and expresses his entire readiness to cancel the obligation at any moment when the evidence of the obligation shall be forthcoming.

A very minute diddle is this. A lady is insulted in the street by a diddler's accomplice. The diddler himself flies to her assistance, and, giving his friend a comfortable thrashing, insists upon attending the lady to her own door. He bows, with his hand upon his heart, and most respectfully bids her adieu. She entreats him, as her deliverer, to walk in and be introduced to her big brother and her papa. With a sigh, he declines to do so. "Is there no way, then, sir," she murmurs, "in which I may be permitted to testify my gratitude?"

"Why, yes, madam, there is. Will you be kind enough to lend me a couple of shillings?"

In the first excitement of the moment the lady decides upon fainting outright. Upon second thought, however, she opens her purse-strings and delivers the specie. Now this, I say, is a diddle minute—for one entire moiety of the sum borrowed has to be paid to the gentleman who had the trouble of performing the insult, and who had then to stand still and be thrashed for performing it.

Rather a small, but still a scientific diddle is this. The diddler approaches the bar of a tavern, and demands a couple of twists of tobacco. These are handed to him, when, having slightly examined them, he says:

"I don't much like this tobacco. Here, take it back, and give me a glass of brandy and water in its place."

The brandy and water is furnished and imbibed, and the diddler makes his way to the door. But the voice of the tavern-keeper arrests him.

"I believe, sir, you have forgotten to pay for your brandy and water."

"Pay for my brandy and water!—didn't I give you the tobacco for the brandy and water? What more would you have?

"But, sir, if you please, I don't remember that you paid me for the tobacco."

"What do you mean by that, you scoundrel? —Did n't I give you back your tobacco? Is n't *that* your tobacco lying *there?* Do you expect me to pay for what I did not take? "

"But, sir," says the publican, now rather at a loss what to say, "but, sir—"

"But me no buts, sir," interrupts the diddler, apparently in very high dudgeon, and slamming the door after him, as he makes his escape.—"But me no buts, sir, and none of your tricks upon travellers."

Here again is a very clever diddle, of which the simplicity is not its least recommendation. A purse, or pocket-book, being really lost, the loser inserts in *one* of the daily papers of a large city a fully descriptive advertisement.

Whereupon our diddler copies the *facts* of this advertisement, with a change of heading, of general phraseology, and *address*. The original, for instance, is long, and verbose, is headed, "A

Pocket-Book Lost!" and requires the treasure, when found, to be left at No. 1 Tom Street. The copy is brief, and being headed with "Lost" only, indicates No. 2 Dick, or No. 3 Harry Street, as the locality in which the owner may be seen. Moreover, it is inserted in at least five or six of the daily papers of the day, while in point of time, it makes its appearance only a few hours after the original. Should it be read by the loser of the purse, he would hardly suspect it to have any reference to his own misfortune. But, of course, the chances are five or six to one, that the finder will repair to the address given by the diddler, rather than to that pointed out by the rightful proprietor. The former pays the reward, pockets the treasure and decamps.

Quite an analogous diddle is this. A lady of ton has dropped, somewhere in the street, a diamond ring of very unusual value. For its recovery, she offers some forty or fifty dollars reward—giving, in her advertisement, a very minute description of the gem, and of its settings, and declaring that, on its restoration at No. so and so, in such and such Avenue, the reward would be paid *instanter,* without a single question being asked. During the lady's absence from home, a day or two afterwards, a ring is heard at the door of No. so and so, in such and such Avenue; a servant appears; the lady of the house is asked for and is declared to be out, at which astounding information, the visitor expresses the most poignant regret. His business is of importance and concerns the lady herself. In fact, he had the good fortune to find her diamond ring. But perhaps it would be as well that he should call again. "By no means!" says the servant; and "By no means!" says the lady's sister and the lady's sister-in-law, who are summoned forthwith. The ring is clamorously identified, the reward is paid, and the finder nearly thrust out of doors. The lady returns and expresses some little dissatisfaction with her sister and sister-in-law, because they happen to have paid forty or fifty dollars for a *fac-simile* of her diamond ring—a *fac-simile* made out of real pinch-beck and unquestionable paste.

But as there is really no end to diddling, so there would be none to this essay, were I even to hint at half the variations, or inflections, of which this science is susceptible. I must bring this paper, perforce, to a conclusion, and this I cannot do better than by a summary notice of a very decent, but rather elaborate diddle, of which our own city was made the theatre, not very long ago, and which was subsequently repeated with success, in other still more verdant localities of the Union. A middle-aged gentleman arrives in town from parts unknown. He is remarkably precise, cautious, staid, and deliberate in his demeanor. His dress is scrupulously neat, but plain, unostentatious. He wears a white cravat, an ample waist coat, made with an eye to comfort alone; thick-soled cosy-looking shoes, and pantaloons without straps.

He has the whole air, in fact, of your well-to-do, sober-sided, exact, and respectable "man of business," *par excellence*—one of the stern and outwardly hard, internally soft, sort of people that we see in the crack high comedies—fellows whose words are so many bonds, and who are noted for giving away guineas, in charity, with the one hand, while, in the way of mere bargain, they exact the uttermost fraction of a farthing with the other.

He makes much ado before he can get suited with a boarding-house. He dislikes children. He has been accustomed to quiet. His habits are methodical—and then he would prefer getting into a private and respectable small family, piously inclined. Terms, however, are no object—only he must insist upon settling his bill on the first of every month, (it is now the second) and begs his landlady, when he finally obtains one to his mind, *not* on any account to forget his instructions upon this point—but to send in a bill, *and* receipt, precisely at ten o'clock on the *first* day of every month, and under no circumstances to put it off to the second.

These arrangements made, our man of business rents an office in a reputable rather than a fashionable quarter of the town. There is nothing he more despises than pretence. "Where there is much show," he says, "there is seldom any thing very solid behind"—an observation which so profoundly impresses his landlady's fancy, that she makes a pencil memorandum of it forthwith, in her great family Bible, on the broad margin of the Proverbs of Solomon.

The next step is to advertise, after some such fashion as this, in the principal business sixpennies of the city—the pennies are eschewed as not "respectable"—and as demanding payment for all advertisements in advance. Our man of business holds it as a point of his faith that work should never be paid for until done.

WANTED.—The advertisers, being about to commence extensive business operations in this city, will require the services of three or four intelligent and competent clerks, to whom a liberal salary will be paid. The very best recommendations, not so much for capacity, as for integrity, will be expected. Indeed, as the duties to be performed, involve high responsibilities, and large amounts of money must necessarily pass through the hands of those engaged, it is deemed advisable to demand a deposit of fifty dollars from each clerk employed. No person need apply, therefore, who is not prepared to leave this sum in the possession of the advertisers, and who cannot furnish the most satisfactory testimonials of morality. Young gentlemen piously inclined will be preferred. Application should be made between the hours of ten and eleven A.M., and four and five P.M., of Messrs.

BOGS, HOGS, LOGS, FROGS, & CO.,
No. 110 Dog Street.

By the thirty-first day of the month, this advertisement has brought to the office of Messrs. Bogs, Hogs, Logs, Frogs and Company, some fifteen or twenty young gentlemen piously inclined. But our man of business is in no hurry to conclude a contract with any—no man of business is *ever* precipitate—and it is not until the most rigid catechism in respect to the piety of each young gentleman's inclination, that his services are engaged and his fifty dollars receipted for, *just* by way of proper precaution, on the part of the respectable firm of Bogs, Hogs, Logs, Frogs, and Company. On the morning of the first day of the next month, the landlady does *not* present her bill, according to promise—a piece of neglect for which the comfortable head of the house ending in *ogs* would no doubt have chided her severely, could he have been prevailed upon to remain in town a day or two for that purpose.

As it is, the constables have had a sad time of it, running hither and thither, and all they can do is to declare the man of business most emphatically, a "hen knee high"—by which some persons imagine them to imply that, in fact, he is n. e. i.—by which again the very classical phrase *non est inventus,* is supposed to be understood. In the meantime the young gentlemen, one and all, are somewhat less piously inclined than before, while the landlady purchases a shilling's worth of the Indian rubber, and very carefully obliterates the pencil memorandum that some fool has made in her great family Bible, on the broad margin of the Proverbs of Solomon.

# THE LITERARY LIFE OF THINGUM BOB, ESQ.

## LATE EDITOR OF THE "GOOSETHERUMFOODLE"

## BY HIMSELF

[Published in the *Southern Literary Messenger*, December, 1844.]

I AM now growing in years, and—since I understand that Shakespeare and Mr. Emmons are deceased—it is not impossible that I may even die. It has occurred to me, therefore, that I may as well retire from the field of Letters and repose upon my laurels. But I am ambitious of signalizing my abdication of the literary sceptre by some important bequest to posterity; and, perhaps, I cannot do a better thing than just pen for it an account of my earlier career. My name, indeed, has been so long and so constantly before the public eye, that I am not only willing to admit the naturalness of the interest which it has everywhere excited, but ready to satisfy the extreme curiosity which it has inspired. In fact, it is no more than the duty of him who achieves greatness to leave behind him, in his ascent, such landmarks as may guide others to be great. I propose, therefore, in the present paper (which I had some idea of calling "Memoranda to Serve for the Literary History of America") to give a detail of those important, yet feeble and tottering, first steps, by which, at length, I attained the high road to the pinnacle of human renown.

Of one's *very* remote ancestors it is superfluous to say much. My father, Thomas Bob, Esq., stood for many years at the summit of his profession, which was that of a merchant-barber, in the city of Smug. His warehouse was the resort of all the principal people of the place, and especially of the editorial corps—a body which inspires all about it with profound veneration and awe. For my own part, I regarded them as gods, and drank in with avidity the rich wit and wisdom which continuously flowed from their august mouths during the process of what is styled "lather." My first moment of positive inspiration must be dated from that ever-memorable epoch, when the brilliant conductor of the *Gad-Fly*, in the intervals of the important process just mentioned, recited aloud, before a conclave of our apprentices, an inimitable poem in honor of the "Only Genuine Oil-of-Bob" (so called from its talented invèntor, my father), and for which effusion the editor of the *Fly* was remunerated with a regal liberality by the firm of Thomas Bob & Company, merchant-barbers.

The genius of the stanzas to the "Oil-of-Bob" first breathed into me, I say, the divine *afflatus*. I resolved at once to become a great man, and to commence by becoming a great poet. That very evening I fell upon my knees at the feet of my father.

"Father," I said, "pardon me!—but I have a soul above lather. It is my firm intention to cut the shop. I would be an editor—I would be a poet—I would pen stanzas to the 'Oil-of-Bob.' Pardon me and aid me to be great!"

"My dear Thingum," replied my father, (I had been christened Thingum after a wealthy relative so surnamed,) "My dear Thingum," he said, raising me from my knees by the ears—"Thingum, my boy, you're a trump, and take after your father in having a soul. You have an immense head, too, and it must hold a great many brains. This I have long seen, and therefore had thoughts of making you a lawyer. The business, however, has grown ungenteel, and that of politician don't pay. Upon the whole you judge wisely;—the trade of editor is best:—and if you can be a poet at the same time,—as most of the editors are, by the by,—why, you will kill two birds with one stone. To encourage you in the beginning of things, I will allow you a garret; pen, ink, and paper; a rhyming dictionary; and a copy of the *Gad-Fly*. I suppose you would scarcely demand any more."

"I would be an ungrateful villain if I did," I replied with enthusiasm. "Your generosity is boundless. I will repay it by making you the father of a genius."

Thus ended my conference with the best of men, and immediately upon its termination I betook myself with zeal to my poetical labors; as upon these, chiefly, I founded my hopes of ultimate elevation to the editorial chair.

In my first attempts at composition I found the stanzas to "The Oil-of-Bob" rather a drawback than otherwise. Their splendor more dazzled than enlightened me. The contemplation of their excellence tended, naturally, to discourage me by comparison with my own abortions; so that for a long time I labored in vain. At length there came into my head one of those exquisitely original ideas which now and then *will* permeate the brain of a man of genius. It was this:—or, rather, thus was it carried into execution. From the rubbish of an old book-stall, in a very remote corner of the town, I got together several antique and altogether unknown or forgotten volumes. The bookseller sold them to me for a song. From one of these, which purported to be a translation of one Dante's "*Inferno*," I copied with remarkable neatness a long passage about a man named Ugolino, who had a parcel of brats. From another, which contained a good many old plays by some person whose name I forget, I extracted in the same manner, and with the same care, a great number of lines about "angels" and "ministers saying grace," and "goblins damned," and more besides of that sort. From a third, which was the composition of some blind man or other, either a Greek or a Choctaw—I cannot be at the pains of remembering every trifle exactly,

—I took about fifty verses beginning with "Achilles' wrath," and "grease," and something else. From a fourth, which I recollect was also the work of a blind man, I selected a page or two all about "hail" and "holy light"; and, although a blind man has no business to write about light, still the verses were sufficiently good in their way.

Having made fair copies of these poems, I signed every one of them "Oppodeldoc" (a fine sonorous name), and, doing each up nicely in a separate envelope, I dispatched one to each of the four principal magazines, with a request for speedy insertion and prompt pay. The result of this well-conceived plan, however, (the success of which would have saved me much trouble in after-life,) served to convince me that some editors are not to be bamboozled, and gave the *coup-de-grace* (as they say in France) to my nascent hopes (as they say in the city of the transcendentals).

The fact is, that each and every one of the magazines in question gave Mr. "Oppodeldoc" a complete using-up, in the "Monthly Notices to Correspondents." The *Hum-Drum* gave him a dressing after this fashion:

> **"Oppodeldoc" (whoever he is) has sent us a long *tirade* concerning a bedlamite whom he styles "Ugolino," who had a great many children that should have been all whipped and sent to bed without their suppers. The whole affair is exceedingly tame—not to say *flat*. "Oppodeldoc" (whoever he is) is entirely devoid of imagination—and imagination, in our humble opinion,**

> is not only the soul of POESY, but also its very heart. "Oppodeldoc" (whoever he is) has the audacity to demand of us, for his twattle, a "speedy insertion and prompt pay." We neither insert nor purchase any stuff of the sort. There can be no doubt, however, that he would meet with a ready sale for all the balderdash he can scribble, at the office of either the *Rowdy-Dow*, the *Lollipop*, or the *Goosetherumfoodle*.

All this, it must be acknowledged, was very severe upon "Oppodeldoc,"—but the unkindest cut was putting the word POESY in small caps. In those five pre-eminent letters what a world of bitterness is there not involved.

But "Oppodeldoc" was punished with equal severity in the *Rowdy-Dow*, which spoke thus:

> We have received a most singular and insolent communication from a person (whoever he is) signing himself "Oppodeldoc,"—thus desecrating the greatness of the illustrious Roman emperor so named. Accompanying the letter of "Oppodeldoc" (whoever he is) we find sundry lines of most disgusting and unmeaning rant about "angels and ministers of grace,"—rant such as no madman short of a Nat Lee, or an "Oppodeldoc," could possibly perpetrate. And for this trash of trash, we are modestly requested to "pay promptly." No, sir—no! We pay for nothing of *that* sort. Apply to the *Hum-Drum*, the *Lollipop*, or the *Goosetherum foodle*. These *periodicals* will undoubtedly accept any literary offal you may send them—and as undoubtedly *promise* to pay for it.

This was bitter indeed upon poor "Oppodeldoc"; but, in this instance, the weight of the satire falls upon the *Hum-Drum*, the *Lollipop*, and the *Goosetherumfoodle*, who are pungently styled "*periodicals*"—in Italics, too—a thing that must have cut them to the heart.

Scarcely less savage was the *Lollipop*, which thus discoursed:

> Some *individual*, who rejoices in the appellation "Oppodeldoc," (to what low uses are the names of the illustrious dead too often applied!) has enclosed us some fifty or sixty *verses* commencing after this fashion:
>
> 'Achilles' wrath, to Greece the direful spring
> Of woes unnumbered, &c., &c., &c., &c.'
>
> "Oppodeldoc" (whoever he is) is respectfully informed that there is not a printer's devil in our office who is not in the daily habit of composing better *lines*. Those of "Oppodeldoc" will not *scan*. "Oppodeldoc" should learn to *count*. But why he should have conceived the idea that *we* (of all others, *we!*) would disgrace our pages with his ineffable nonsense is utterly beyond comprehension. Why, the absurd twattle is scarcely good enough for the *Hum-Drum*, the *Rowdy-Dow*, the *Goosetherumfoodle*,—things that are in the practice of publishing "Mother Goose's Melodies" as original lyrics. And "Oppodeldoc" (whoever he is) has even the assurance to demand *pay* for this drivel. Does "Oppodeldoc" (whoever he is) know—is he aware that we could not be paid to insert it?"

As I perused this I felt myself growing gradually smaller and smaller, and when I came to the point at which the editor sneered at the poem as "*verses*," there was little more than an ounce of me left. As for "Oppodeldoc," I began to experience *compassion* for the poor fellow. But the *Goosetherumfoodle* showed, if possible, less mercy than the *Lollipop*. It was the *Goosetherumfoodle* that said—

A wretched poetaster, who signs himself "Oppodeldoc," is silly enough to fancy that *we* will print and *pay for* a medley of incoherent and ungrammatical bombast which he has transmitted to us, and which commences with the following most *intelligible* line:

'Hail, Holy Light! Offspring of Heaven, first born.'

We say, "most *intelligible*." "Oppodeldoc" (whoever he is) will be kind enough to tell us, perhaps, how "*hail*" can be "*holy light*." We always regarded it as *frozen rain*. Will he inform us, also, how frozen rain can be, at one and the same time, both "holy light" (whatever that is) and an "offspring"?—which latter term (if we understand any thing about English) is only employed, with propriety, in reference to small babies of about six weeks old. But it is preposterous to descant upon such absurdity—although "Oppodeldoc" (whoever he is) has the unparalleled effrontery to suppose that we will not only "insert" his ignorant ravings, but (absolutely) *pay for them!*

Now this is fine—it is rich!—and we have half a mind to punish this young scribbler for his egotism by really publishing his effusion *verbatim et literatim*, as he has written it. We could inflict no punishment so severe, and we *would* inflict it, but for the boredom which we should cause our readers in so doing.

Let "Oppodeldoc" (whoever he is) send any future *composition* of like character to the *Hum-Drum*, the *Lollipop*, or the *Rowdy-Dow*. *They* will "insert" it. *They* "insert" every month just such stuff. Send it to *them*. WE are not to be insulted with impunity."

This made an end of me; and as for the *Hum-Drum*, the *Rowdy-Dow*, and the *Lollipop*, I never could comprehend how they survived it. The putting *them* in the smallest possible *minion*, (that was the rub—thereby insinuating their lowness—their baseness,) while WE stood looking down upon them in gigantic capitals!—oh it was *too* bitter!—it was wormwood—it was gall. Had I been either of these periodicals I would have spared no pains to have the *Goosetherumfoodle* prosecuted. It might have been done under the Act for the "Prevention of Cruelty to Animals." As for Oppodeldoc (whoever he was) I had by this time lost all patience with the fellow, and sympathized with him no longer. He was a fool, beyond doubt, (whoever he was,) and got not a kick more than he deserved.

The result of my experiment with the old books convinced me, in the first place, that "honesty is the best policy," and, in the second, that if I could not write better than Mr. Dante, and the two blind men, and the rest of the old set, it would, at least, be a difficult matter to write worse. I took heart, therefore, and determined to prosecute the "entirely original" (as they say on the covers of the magazines), at whatever cost of study and pains. I again placed before my eyes, as a model, the brilliant stanzas on "The Oil-of-Bob" by the editor of the *Gad-Fly* and resolved to construct an ode on the same sublime theme, in rivalry of what had already been done.

With my first line I had no material difficulty. It ran thus:

*"To pen an Ode upon the 'Oil-of-Bob.'"*

Having carefully looked out, however, all the legitimate rhymes to "Bob," I found it impossible to proceed. In this dilemma I had recourse to paternal aid; and, after some hours of mature thought, my father and myself thus constructed the poem:

> *"To pen an Ode upon the 'Oil-of-Bob'*
> *Is all sorts of a job.*
> (Signed) Snob."

To be sure, this composition was of no very great length,—but I "have yet to learn," as they say in the *Edinburgh Review*, that the mere extent of a literary work has anything to do with its merit. As for the Quarterly cant about "sustained effort," it is impossible to see the sense of it. Upon the whole, therefore, I was satisfied with the success of my maiden attempt, and now the only question regarded the disposal I should make of it. My father suggested that I should send it to the *Gad-Fly*,—but there were two reasons which operated to prevent me from so doing. I dreaded the jealousy of the editor—and I had ascertained that he did not pay for original contributions. I therefore, after due deliberation, consigned the article to the more dignified pages of the *Lollipop* and waited the event in anxiety, but with resignation.

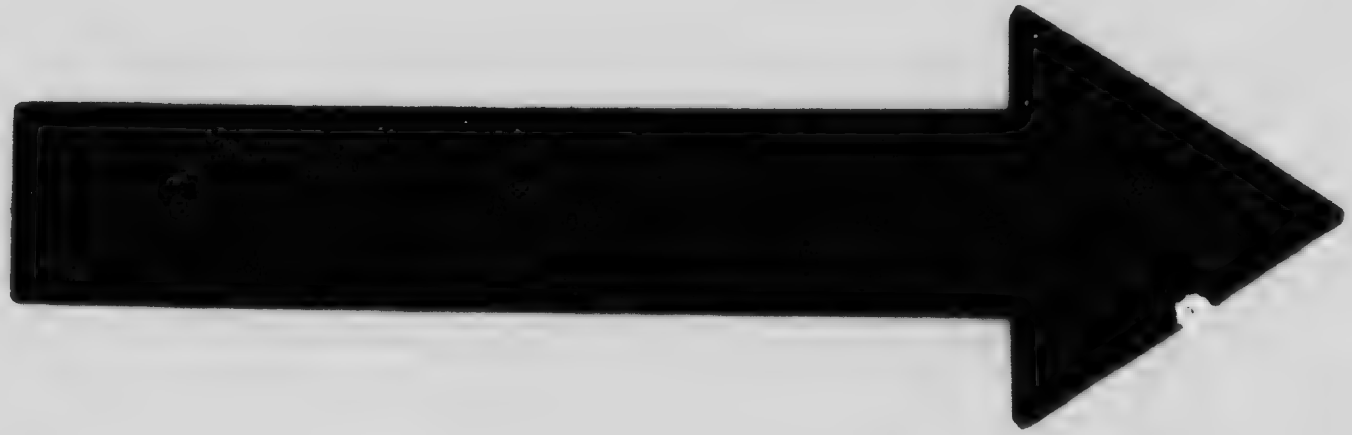
In the very next published number I had the proud satisfaction of seeing my poem printed at length, as the leading article, with the following significent words, prefixed in italics and between brackets:

*[We call the attention of our readers to the subjoined admirable stanzas on "The Oil-of-Bob." We need say nothing of their sublimity, or of their pathos:—it is im-*

*possible to peruse them without tears. Those who have been nauseated with a sad dose on the same august topic from the goose-quill of the editor of the "Gad-Fly," will do well to compare the two compositions.*

*P. S.—We are consumed with anxiety to probe the mystery which envelops the evident pseudonym "Snob." May we hope for a personal interview?*]

All this was scarcely more than justice, but it was, I confess, rather more than I had expected:—I acknowledged this, be it observed, to the everlasting disgrace of my country and of mankind. I lost no time, however, in calling upon the editor of the *Lollipop* and had the good fortune to find this gentleman at home. He saluted me with an air of profound respect, slightly blended with a fatherly and patronizing admiration, wrought in him, no doubt, by my appearance of extreme youth and inexperience. Begging me to be seated, he entered at once upon the subject of my poem;—but modesty will ever forbid me to repeat the thousand compliments which he lavished upon me. The eulogies of Mr. Crab (such was the editor's name) were, however, by no means fulsomely indiscriminate. He analyzed my composition with much freedom and great ability—not hesitating to point out a few trivial defects—a circumstance which elevated him highly in my esteem. The *Gad-Fly* was, of course, brought upon the *tapis*, and I hope never to be subjected to a criticism so searching, or to rebukes so withering, as were bestowed by Mr. Crab upon that unhappy effusion. I had been ac-



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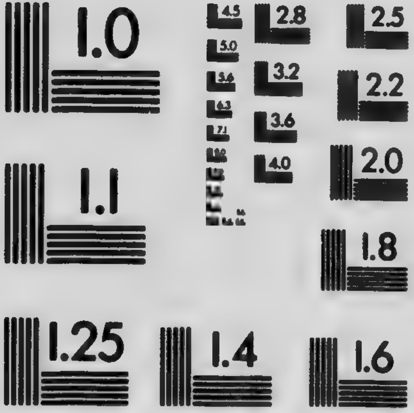

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customed to regard the editor of the *Gad-Fly* as something superhuman; but Mr. Crab soon disabused me of that idea. He set the literary as well as the personal character of the Fly (so Mr. C. satirically designated the rival editor), in its true light. He, the Fly, was very little better than he should be. He had written infamous things. He was a penny-a-liner, and a buffoon. He was a villain. He had composed a tragedy which set the whole country in a guffaw, and a farce which deluged the universe in tears. Besides all this, he had the impudence to pen what he meant for a lampoon upon himself (Mr. Crab), and the temerity to style him "an ass." Should I at any time wish to express my opinion of Mr. Fly, the pages of the *Lollipop* Mr. Crab assured me, were at my unlimited disposal. In the meantime, as it was very certain that I would be attacked in the Fly for my attempt at composing a rival poem on the "Oil-of-Bob," he (Mr. Crab) would take it upon himself to attend, pointedly, to my private and personal interests. If I were not made a man of at once, it should not be the fault of himself (Mr. Crab).

Mr. Crab having now paused in his discourse (the latter portion of which I found it impossible to comprehend), I ventured to suggest something about the remuneration which I had been taught to expect for my poem, by an announcement on the cover of the *Lollipop*, declaring that it (the *Lollipop*) "insisted upon being permitted to pay exorbitant prices for all accepted contributions,—frequently expending more money for a single brief poem than the whole annual cost of the *Hum-Drum*, the *Rowdy-Dow*, and the *Goosetherumfoodle* combined."

As I mentioned the word "remuneration," Mr. Crab first opened his eyes, and then his mouth, to quite a remarkable extent, causing his personal appearance to resemble that of a highly agitated elderly duck in the act of quacking; and in this condition he remained (ever and anon pressing his hands tightly to his forehead, as if in a state of desperate bewilderment) until I had nearly made an end of what I had to say.

Upon my conclusion, he sank back into his seat, as if much overcome, letting his arms fall lifelessly by his side, but keeping his mouth still rigorously open, after the fashion of the duck. While I remained in speechless astonishment at behavior so alarming, he suddenly leaped to his feet and made a rush at the bell-rope; but just as he reached this, he appeared to have altered his intention, whatever it was, for he dived under a table and immediately re-appeared with a cudgel. This he was in the act of uplifting (for what purpose I am at a loss to imagine), when all at once, there came a benign smile over his features, and he sank placidly back in his chair.

"Mr. Bob," he said, (for I had sent up my card before ascending myself,) "Mr. Bob, you are a young man, I presume—*very?*"

I assented; adding that I had not yet concluded my third lustrum.

"Ah!" he replied, "very good! I see how it is—say no more! Touching this matter of compensation, what you observe is very just,—in fact it is excessively so. But ah—ah—the *first* contribution—the *first,* I say—it is never the magazine custom to pay for,—you comprehend, eh? The truth is, we are usually the *recipients* in such case." [Mr. Crab smiled blandly as he emphasized the word "recipients."] "For the most part, we are *paid* for the insertion of a maiden attempt—especially in verse. In the second place, Mr. Bob, the magazine rule is never to disburse what we term in France the *argent comptant:*—I have no doubt you understand. In a quarter or two after publication of the article—or in a year or two—we make no objection to giving our note at nine months; provided, always, that we can so arrange our affairs as to be quite certain of a 'burst up' in six. I really *do* hope, Mr. Bob, that you will look upon this explanation as satisfactory." Here Mr. Crab concluded, and the tears stood in his eyes.

Grieved to the soul at having been, however innocently, the cause of pain to so eminent and so sensitive a man, I hastened to apologize, and to reassure him, by expressing my perfect coincidence with his views, as well as my entire appreciation of the delicacy of his position. Having done all this in a neat speech, I took leave.

One fine morning, very shortly afterward, "I awoke and found myself famous." The extent of my renown will be best estimated by reference to the editorial opinions of the day. These opinions, it will be seen, were embodied in critical notices of the number of the *Lollipop* containing my poem, and are perfectly satisfactory, conclusive, and clear with the exception, perhaps, of the hieroglyphical marks, "*Sep.* 15—1 *t*," appended to each of the critiques.

The *Owl*, a journal of profound sagacity, and well known for the deliberate gravity of its literary decisions—the *Owl*, I say, spoke as follows:

> The *Lollipop!* The October number of this delicious magazine surpasses its predecessors, and sets competition at defiance. In the beauty of its typography and paper—in the number and excellence of its steel plates—as well as in the literary merit of its contributions—the *Lollipop* compares with its slow-paced rivals as Hyperion with Satyr. The *Hum-Drum*, the *Rowdy-Dow*, and the *Goosetherumfoodle*, excel, it is true, in braggadocio, but in all other points, give us the *Lollipop!* How this celebrated journal can sustain its evidently tremendons expenses, is more than we can understand. To be sure, it has a circulation of 100,000, and its subscription list has increased one fourth during the last month; but, on the other hand, the sums it disburses constantly for contributions are inconceivable. It is reported that Mr. Slyass received no less than thirty-seven and a half cents for his inimitable paper on "Pigs." With Mr. CRAB, as editor, and with such names upon the list of contributors as SNOB and Slyass, there can be no such word as "fail" for the *Lollipop*. Go and subscribe. *Sep* 15—1 *t*.

I must say that I was gratified with this high-toned notice from a paper so respectable as the

*Owl.* The placing my name—that is to say, my *nom de guerre*—in priority of station to that of the great Slyass, was a compliment as happy as I felt it to be deserved.

My attention was next arrested by these paragraphs in the *Toad*—a print highly distinguished for its uprightness and independence—for its entire freedom from sycophancy and subservience to the givers of dinners:

> The *Lollipop* for October is out in advance of all its contemporaries, and infinitely surpasses them, of course, in the splendor of its embellishments, as well as in the richness of its contents. The *Hum-Drum*, the *Rowdy-Dow*, and the *Goosetherumfoodle* excel, we admit, in braggadocio, but, in all other points, give us the *Lollipop*. How this celebrated magazine can sustain its evidently tremendous expenses is more than we can understand. To be sure, it has a circulation of 200,000, and its subscription list has increased one third during the last fortnight, but, on the other hand, the sums it disburses, monthly, for contributions, are fearfully great. We learn that Mr. Mumblethumb received no less than fifty cents for his late "Monody in a Mud-Puddle."
>
> Among the original contributors to the present number we notice (besides the eminent editor, Mr. CRAB), such men as SNOB, Slyass, and Mumblethumb. Apart from the editorial matter, the most valuable paper, nevertheless, is, we think, a poetical gem by Snob, on the "Oil-of-Bob,"—but our readers must not suppose from the title of this incomparable *bijou*, that it bears any similitude to some balderdash on the same subject by a certain contemptible individual whose name is unmentionable to ears polite. The *present* poem "On the Oil-of-Bob," has excited universal anxiety and curiosity in respect to the owner of the evident pseudonym, "Snob,"—a curiosity which, happily, we have it in our power to satisfy. "Snob" is the *nom de plume* of Mr. Thingum Bob, of this city,—a relative of the great Mr.

Thingum (after whom he is named), and otherwise connected with the most illustrious families of the State. His father, Thomas Bob, Esq., is an opulent merchant in Smug. *Sep.* 15—1 t.

This generous approbation touched me to the heart—the more especially as it emanated from a source so avowedly—so proverbially pure as the *Toad*. The word "balderdash," as applied to the "Oil-of-Bob" of the Fly, I considered singularly pungent and appropriate. The words "gem" and "*bijou*," however, used in reference to my composition, struck me as being, in some degree, feeble. They seemed to me to be deficient in force. They were not sufficiently *prononcés* (as we have it in France).

I had hardly finished reading the *Toad*, when a friend placed in my hands a copy of the *Mole*, a daily, enjoying high reputation for the keenness of its perception about matters in general, and for the open, honest, above-ground style of its editorials. The *Mole* spoke of the *Lollipop* as follows:

We have just received the *Lollipop* for October, and *must* say that never before have we perused any single number of any periodical which afforded us a felicity so supreme. We speak advisedly. The *Hum-Drum*, the *Rowdy-Dow*, and the *Goosetherumfoodle* must look well to their laurels. These prints, no doubt, surpass every thing in loudness of pretension, but, in all other points, give us the *Lollipop!* How this celebrated magazine can sustain its evidently tremendous expenses, is more than we can comprehend. To be sure, it has a circulation of 300,000; and its subscription list has increased one half within the last week, but then the sum it disburses, monthly, for contributions, is astonishingly enormous. We have it upon good authority that Mr. Fatquack received no less than sixty-two cents and a half for his late domestic nouvellette, the "Dish-Clout."

The contributors to the number before us are Mr. Crab (the eminent editor), Snob, Mumblethumb, Fatquack, and others; but, after the inimitable compositions of the editor himself, we prefer a diamond-like effusion from the pen of a rising poet who writes over the signature "Snob"—a *nom de guerre* which we predict will one day extinguish the radiance of "Boz." "Snob," we learn, is a Mr. Thingum Bob, Esq., sole heir of a wealthy merchant of this city, Thomas Bob, Esq., and a near relative of the distinguished Mr. Thingum. The title of Mr. B.'s admirable poem is the "Oil-of-Bob"—a somewhat unfortunate name, by-the-by, as some contemptible vagabond connected with the penny press has already disgusted the town with a great deal of drivel upon the same topic. There will be no danger, however, of confounding the compositions.

*Sept.* 15—1 *t.*

The generous approbation of so clear-sighted a journal as the *Mole* penetrated my soul with delight. The only objection which occurred to me was, that the terms "contemptible vagabond" might have been better written "*odious* and contemptible *wretch, villain,* and vagabond." This would have sounded more gracefully, I think. "Diamond-like," also, was scarcely, it will be admitted, of sufficient intensity to express what the *Mole* evidently *thought* of the brilliancy of the "Oil-of-Bob."

On the same afternoon in which I saw these notices in the *Owl,* the *Toad,* and the *Mole,* I happened to meet with a copy of the *Daddy-Long-Legs,* a periodical proverbial for the extreme extent of its understanding. And it was the *Daddy-Long-Legs* which spoke thus:

The *Lollipop!!* This gorgeous magazine is already before the public for October. The question of pre-eminence is forever put to rest, and hereafter it will be excessively preposterous in the *Hum-Drum*, the *Rowdy-Dow*, or the *Goosetherumfoodle* to make any further spasmodic attempts at competition. These journals may excel the *Lollipop* in outcry, but, in all other points, give us the *Lollipop!* How this celebrated magazine can sustain its evidently tremendous expenses, is past comprehension. To be sure it has a circulation of precisely half a million, and its subscription list has increased seventy-five per cent. within the last couple of days, but then the sums it disburses, monthly, for contributions, are scarcely credible; we are cognizant of the fact, that Mademoiselle Cribalittle received no less than eighty-seven cents and a half for her late valuable Revolutionary tale, entitled "The York-Town Katy-Did, and the Bunker-Hill Katy-Did n't."

The most able papers in the present number are, of course, those furnished by the editor (the eminent Mr. CRAB), but there are numerous magnificent contributions from such names as SNOB, Mademoiselle Cribalittle, Slyass, Mrs. Fibalittle, Mumblethumb, Mrs. Squibalittle, and last, though not least, Fatquack. The world may well be challenged to produce so rich a galaxy of genius.

The poem over the signature "SNOB" is, we find, attracting universal commendation, and, we are constrained to say, deserves, if possible, even more applause than it has received. The "Oil-of-Bob" is the title of this masterpiece of eloquence and art. One or two of our readers *may* have a *very* faint, although sufficiently disgusting recollection of a poem (?) similarly entitled, the perpetration of a miserable penny-a-liner, mendicant, and cut-throat, connected in the capacity of scullion, we believe, with one of the indecent prints about the purlieus of the city; we beg them, for God's sake, not to confound the compositions. The author of the "Oil-of-Bob," is, we hear, THINGUM BOB, Esq., a gentleman of high genius, and a scholar. "Snob" is merely a *nom de guerre.* *Sep.* 15—1 t.

I could scarcely restrain my indignation while I perused the concluding portions of this diatribe. It was clear to me that the yea-nay manner—not to say the gentleness,—the positive forbearance—with which the *Daddy-Long-Legs* spoke of that pig, the editor of the *Gad-Fly*,—it was evident to me, I say, that this gentleness of speech could proceed from nothing else than a partiality for the *Fly*—whom it was clearly the intention of the *Daddy-Long-Legs* to elevate into reputation at my expense. Any one, indeed, might perceive, with half an eye, that, had the real design of the *Daddy* been what it wished to appear, it (the *Daddy*) might have expressed itself in terms more direct, more pungent, and altogether more to the purpose. The words "penny-a-liner," "mendicant," "scullion," and "cut-throat," were epithets so intentionally inexpressive and equivocal, as to be worse than nothing when applied to the author of the very worse stanzas ever penned by one of the human race. We all know what is meant by "damning with faint praise," and, on the other hand, who could fail seeing through the covert purpose of the *Daddy*,—that of glorifying with feeble abuse?

What the *Daddy* chose to say to the *Fly*, however, was no business of mine. What it said of myself *was*. After the noble manner in which the *Owl*, the *Toad*, the *Mole*, had expressed themselves in respect to my ability, it was rather too much to be coolly spoken of by a thing like the *Daddy-Long-Legs*, as merely "a gentleman of high genius and a scholar." Gentleman indeed! I made up my mind at once either to get a written apology from the *Daddy-Long-Legs*, or to call it out.

Full of this purpose, I looked about me to find a friend whom I could entrust with a message to his *Daddy*ship, and as the editor of the *Lollipop* had given me marked tokens of regard, I at length concluded to seek assistance upon the present occasion.

I have never yet been able to account, in a manner satisfactory to my own understanding, for the *very* peculiar countenance and demeanor with which Mr. Crab listened to me, as I unfolded to him my design. He again went through the scene of the bell-rope and cudgel, and did not omit the duck. At one period I thought he really intended to quack. His fit, nevertheless, finally subsided as before, and he began to act and speak in a rational way. He declined bearing the cartel, however, and in fact, dissuaded me from sending it at all; but was candid enough to admit the *Daddy-Long-Legs* had been disgracefully in the wrong—more especially in what related to the epithets "gentleman and scholar."

Toward the end of this interview with Mr. Crab, who really appeared to take a paternal interest in my welfare, he suggested to me that

I might turn an honest penny, and at the same time, advance my reputation, by occasionally playing Thomas Hawk for the *Lollipop*.

I begged Mr. Crab to inform me who was Mr. Thomas Hawk, and how it was expected that I should play him.

Here Mr. Crab again "made great eyes" (as we say in Germany), but at length, recovering himself from a profound attack of astonishment, he assured me that he employed the words "Thomas Hawk" to avoid the colloquialism, Tommy, which was low—but that the true idea was Tommy Hawk—or tomahawk—and that by "playing tomahawk" he referred to scalping, brow-beating, and otherwise using up the herd of poor-devil authors.

I assured my patron that, if this was all, I was perfectly resigned to the task of playing Thomas Hawk. Hereupon Mr. Crab desired me to use up the editor of the *Gad-Fly* forthwith, in the fiercest style within the scope of my ability, and as a specimen of my powers. This I did, upon the spot, in a review of the original "Oil-of-Bob," occupying thirty-six pages of the *Lollipop*. I found playing Thomas Hawk, indeed, a far less onerous occupation than poetizing; for I went upon *system* altogether, and thus it was easy to do the thing thoroughly well. My practice was this. I bought auction copies (cheap) of "Lord Brougham's speeches," "Cobbett's Complete Works," the "New Slang-Syllabus," the "Whole Art of Snubbing," "Prentice's Billingsgate" (folio edition), and "Lewis G. Clarke on

Tongue." These works I cut up thoroughly with a curry-comb, and then, throwing the shreds into a sieve, sifted out carefully all that might be thought decent (a mere trifle); reserving the hard phrases, which I threw into a large tin pepper-castor with longitudinal holes, so that an entire sentence could get through without material injury. The admixture was then ready for use. When called upon to play Thomas Hawk, I anointed a sheet of foolscap with the white of a gander's egg; then, shredding the thing to be reviewed as I had previously shredded the books—only with more care, so as to get every word separate—I threw the latter shreds in with the former, screwed on the lid of the castor, gave it a shake, and so dusted out the mixture upon the egged foolscap; where it stuck. The effect was beautiful to behold. It was captivating. Indeed, the reviews I brought to pass by this simple expedient have never been approached, and were the wonder of the world. At first, through bashfulness—the result of inexperience—I was a little put out by a certain inconsistency—a certain air of the *bizarre* (as we say in France), worn by the composition as a whole. All the phrases did not *fit* (as we say in the Anglo-Saxon). Many were quite awry. Some, even, were upsidedown; and there were none of them which were not in some measure, injured in regard to effect, by this latter species of accident, when it occurred—with the exception of Mr. Lewis Clarke's paragraphs, which were so vigorous and altogether stout, that they seemed not particularly disconcerted by any extreme of position, but looked equally happy and satisfactory, whether on their heads, or on their heels.

What became of the editor of the *Gad-Fly* after the publication of my criticism on his "Oil-of-Bob," it is somewhat difficult to determine. The most reasonable conclusion is, that he wept himself to death. At all events he disappeared instantaneously from the face of the earth, and no man has seen even the ghost of him since.

This matter having been properly accomplished, and the Furies appeased, I grew at once into high favor with Mr. Crab. He took me into his confidence, gave me a permanent situation as Thomas Hawk of the *Lollipop,* and, as for the present, he could afford me no salary, allowed me to profit, at discretion, by his advice.

"My dear Thingum," said he to me one day after dinner, "I respect your abilities and love you as a son. You shall be my heir. When I die I will bequeath you the *Lollipop.* In the meantime I will make a man of you—I *will*—provided always that you follow my counsel. The first thing to do is to get rid of the old bore."

"Boar?" said I inquiringly—"pig, eh?—*aper?* (as we say in Latin)—who?—where?"

"Your father," said he.

"Precisely," I replied,—"pig."

"You have your fortune to make, Thingum," resumed Mr. Crab, "and that governor of yours is a millstone about your neck. We must cut him at once." [Here I took out my knife.] "We must cut him," continued Mr. Crab, "decidedly and forever. He won't do—he *won't*. Upon second thoughts, you had better kick him, or cane him, or something of that kind."

"What do you say," I suggested modestly, "to my kicking him in the first instance, caning him afterward, and winding up by tweaking his nose?"

Mr. Crab looked at me musingly for some moments, and then answered:

"I think, Mr. Bob, that what you propose would answer sufficiently well—indeed remarkably well—that is to say, as far as it went—but barbers are exceedingly hard to cut, and I think, upon the whole, that, having performed upon Thomas Bob the operations you suggest, it would be advisable to blacken, with your fists, both his eyes, very carefully and thoroughly, to prevent his ever seeing you again in fashionable promenades. After doing this, I really do not perceive that you can do any more. However—it might be just as well to roll him once or twice in the gutter, and then put him in charge of the police. Any time the next morning you can call at the watch-house and swear an assault."

I was much affected by the kindness of feeling toward me personally, which was evinced in this excellent advice of Mr. Crab, and I did not fail to profit by it forthwith. The result was, that I got rid of the old bore, and began to feel a little independent and gentleman-like. The want of money, however, was, for a few weeks, a source of some discomfort; but at length, by carefully putting to use my two eyes, and observing how matters went just in front of my nose, I perceived how the thing was to be brought about. I say "thing"—be it observed—for they tell me the Latin for it is *rem*. By the way, talking of Latin, can any one tell me the meaning of *quocunque*—or what is the meaning of *modo?*

My plan was exceedingly simple. I bought, for a song, a sixteenth of the *Snapping-Turtle:* —that was all. The thing was *done,* and I put money in my purse. There were some trivial arrangements afterward, to be sure; but these formed no portion of the plan. They were a consequence—a result. For example, I bought pen, ink, and paper, and put them into furious activity. Having thus completed a Magazine article, I gave it, for appellation, "FOL LOL, *by the Author of* 'THE OIL-OF-BOB,'" and enveloped it to the *Goosetherumfoodle.* That journal, however, having pronounced it "twattle" in the "Monthly Notices to Correspondents," I reheaded the paper "'Hey-Diddle-Diddle,' by THINGUM BOB, Esq., Author of the Ode on 'The Oil-of-Bob,' *and* Editor of the *Snapping-Turtle.*" With this amendment, I re-enclosed it to the *Goosetherumfoodle,* and, while I awaited a reply, published daily, in the *Turtle,* six columns of what may be termed philosophical and analytical investigation of the literary merits of the *Goosetherumfoodle,* as well as of the personal character of the editor of the *Goosetherumfoodle.* At the end of a week the *Goosetherumfoodle* discovered that it had, by some odd mistake, "confounded a stupid article, headed, 'Hey-Diddle-Diddle,' and composed by some unknown ignoramus, with a gem of resplendent lustre similarly entitled, the work of Thingum Bob, Esq., the celebrated author of 'The Oil-of-Bob.'" The *Goosetherumfoodle* deeply "regretted this very natural accident," and promised, moreover, an insertion of the *genuine* "Hey-Diddle-Diddle" in the very next number of the Magazine.

The fact is, I *thought*—I *really* thought—I thought at the time—I thought *then*—and have no reason for thinking otherwise *now*—that the *Goosetherumfoodle did* make a mistake. With the best intentions in the world, I never knew any thing that made as many singular mistakes as the *Goosetherumfoodle.* From that day I took a liking to the *Goosetherumfoodle,* and the result was I soon saw into the very depths of its literary merits, and did not fail to expatiate upon them, in the *Turtle,* whenever a fitting opportunity occurred. And it is to be regarded as a very peculiar coincidence—as one of those positively *remarkable* coincidences which set a man to serious thinking—that just such a total revolution of opinion—just such entire *bouleversement* (as we say in French),—just such thorough *topsiturviness* (if I may be permitted to employ a rather forcible term of the Choctaws), as happened, *pro* and *con,* between myself on the one part, and the *Goosetherumfoodle* on the other, did actually again happen, in a brief period afterwards, and with precisely similar circumstances, in the case of myself and the *Rowdy-*

*Dow,* and in the case of myself and the *Hum-Drum.*

Thus it was that, by a master-stroke of genius, I at length consummated my triumphs by "putting money in my purse," and thus may be said really and fairly to have commenced that brilliant and eventful career which rendered me illustrious, and which now enables me to say with Chateaubriand: "I have made history"—"*J'ai fait l'histoire.*"

I have indeed "made history." From the bright epoch which I now record, my actions—my works—are the property of mankind. They are familiar to the world. It is, then, needless for me to detail how, soaring rapidly, I fell heir to the *Lollipop*—how I merged this journal in the *Hum-Drum*—how again I made purchase of the *Rowdy-Dow,* thus combining the three periodicals—how lastly, I effected a bargain for the sole remaining rival, and united all the literature of the country in one magnificent Magazine known everywhere as the

*Rowdy-Dow, Lollipop, Hum-Drum,*
*and*
*Goosetherumfoodle.*

Yes; I have made history. My fame is universal. It extends to the uttermost ends of the earth. You cannot take up a common newspaper in which you shall not see some allusion to the immortal Thingum Bob. It is Mr. Thingum Bob said so, and Mr. Thingum Bob wrote this, and

Mr. Thingum Bob did that. But I am meek and expire with an humble heart. After all, what is it?—this indescribable something which men will persist in terming "genius"? I agree with Buffon—with Hogarth—it is but *diligence* after all.

Look at *me!*—how I labored—how I toiled—how I wrote! Ye Gods, did I *not* write? I knew not the word "ease." By day I adhered to my desk, and at night, a pale student, I consumed the midnight oil. You should have seen me—you *should.* I leaned to the right. I leaned to the left. I sat forward. I sat backward. I sat *tête baissée* (as they have it in the Kickapoo), bowing my head close to the alabaster page. And, through all, I—*wrote.* Through joy and through sorrow, I—*wrote.* Through hunger and through thirst, I—*wrote.* Through good report and through ill report, I—*wrote.* Through sunshine and through moonshine, I—*wrote.* What I wrote it is unnecessary to say. The *style!*—that was the thing. I caught it from Fatquack—whizz!—fizz!—and I am giving you a specimen of it now.

# THE ELK

## (Morning on the Wissahiccon.)

[Published in *The Opal*, 1844.]

THE natural scenery of America has often been contrasted, in its general features as well as in detail, with the landscape of the Old World—more especially in Europe—and not deeper has been the enthusiasm, than wide the dissension, of the supporters of each region. The discussion is one not likely to be soon closed, for, although much has been said on both sides, a word more yet remains to be said.

The most conspicuous of the British tourists who have attempted a comparison, seem to regard our northern and eastern seaboard, comparatively speaking, as all of America, at least, as all of the United States, worthy consideration. They say little, because they have seen less, of the gorgeous interior scenery of some of our western and southern districts—of the vast valley of Louisiana, for example,—a realization of the wildest dreams of paradise. For the most part, these travellers content themselves with a hasty inspection of the natural *lions* of the land—the Hudson, Niagara, the Catskills, Harper's Ferry, the lakes of New York, the Ohio, the prairies, and the Mississippi. These, indeed, are objects well worthy the contemplation even of him who has just clambered by the castellated Rhine, or roamed

> "By the blue rushing of the arrowy Rhone;"

but these are not *all* of which we can boast; and, indeed, I will be so hardy as to assert that there are innumerable quiet, obscure, and scarcely explored nooks, within the limits of the United States, that, by the true artist, or cultivated lover of the grand and beautiful amid the works of God, will be preferred to each *and to all* of the chronicled and better accredited scenes to which I have referred.

In fact, the real Edens of the land lie far away from the track of our own most deliberate tourists—how very far, then, beyond the reach of the foreigner, who, having made with his publisher at home arrangements for a certain amount of comment upon America, to be furnished in a stipulated period, can hope to fulfil his agreement in no other manner than by steaming it, memorandum-book in hand, through only the most beaten thoroughfares of the country!

I mentioned, just above, the valley of Louisiana. Of all extensive areas of natural loveliness, this is perhaps the most lovely. No fiction has approached it. The most gorgeous imagination might derive suggestions from its exuberant beauty. And *beauty* is, indeed, its sole character. It has little, or rather nothing, of the sublime. Gentle undulations of soil, interwreathed with fantastic crystallic streams, banked by flowery slopes, and backed by a forest vegetation, gigantic, glossy, multicoloured, sparkling with gay birds and burthened with perfume—these features make up, in the vale of Louisiana, the most voluptuous natural scenery upon earth.

But, even of this delicious region, the sweeter portions are reached only by bypaths. Indeed, in America generally, the traveller who would behold the finest landscapes, must seek them not by the railroad, nor by the steamboat, nor by the stage-coach, nor in his private carriage, nor yet even on horseback—but on foot. He must *walk*, he must leap ravines, he must risk his neck among precipices, or he must leave unseen the truest, the richest, and the most unspeakable glories of the land.

Now in the greater portion of Europe no such necessity exists. In England it exists not at all. The merest dandy of a tourist may there visit every nook worth visiting without detriment to his silk stockings; so thoroughly known are all points of interest, and so well-arranged are the means of attaining them. This consideration has never been allowed its due weight, in comparisons of the natural scenery of the Old and New Worlds. The entire loveliness of the former is collated with only the most noted, and with by no means the most eminent items in the general loveliness of the latter.

River scenery has, unquestionably, within itself, all the main elements of beauty, and, time out of mind, has been the favourite theme of the poet. But much of this fame is attributable to the predominance of travel in fluvial over that in mountainous districts. In the same way, large rivers, because usually highways, have, in all countries, absorbed an undue share of admiration. They are more observed, and, consequently, made more the subject of discourse, than less important, but often more interesting streams.

A singular exemplification of my remarks upon this head may be found in the Wissahiccon, a brook, (for more it can scarcely be called,) which empties itself into the Schuylkill, about six miles westward of Philadelphia. Now the Wissahiccon is of so remarkable a loveliness that, were it flowing in England, it would be the theme of every bard, and the common topic of every tongue, if, indeed, its banks were not parcelled off in lots, at an exorbitant price, as building-sites for the villas of the opulent. Yet it is only within a very few years that any one has more than heard of the Wissahiccon, while the broader and more navigable water into which it flows, has been long celebrated as one of the finest specimens of American river scenery. The Schuylkill, whose beauties have been much exaggerated, and whose banks, at least in the neighborhood of Philadelphia, are marshy like those of the Delaware, is not at all comparable, as an object of picturesque interest, with the more humble and less notorious rivulet of which we speak.

It was not until Fanny Kemble, in her droll book about the United States, pointed out to the Philadelphians the rare loveliness of a stream which lay at their own doors, that this loveliness was more than suspected by a few adventurous pedestrians of the vicinity. But, the "Journal" having opened all eyes, the Wissahiccon, to a certain extent, rolled at once into notoriety. I say "to a certain extent," for, in fact, the true beauty of the stream lies far above the *route* of the Philadelphian picturesque-hunters, who rarely proceed farther than a mile or two above the mouth of the rivulet—for the very excellent reason that here the carriage-road stops. I would advise the adventurer who would behold its finest points to take the Ridge Road, running westwardly from the city, and, having reached the second lane beyond the sixth mile-stone, to follow this lane to its termination. He will thus strike the Wissahiccon, at one of its best reaches, and, in a skiff, or by clambering along its banks, he can go up or down the stream, as best suits his fancy, and in either direction will meet his reward.

I have already said, or should have said, that the brook is narrow. Its banks are generally, indeed almost universally, precipitous, and consist of high hills, clothed with noble shrubbery near the water, and crowned at a greater elevation, with some of the most magnificent forest trees of America, among which stands conspicuous the *liriodendron tulipiferum*. The immediate shores, however, are of granite, sharply-defined or moss-covered, against which the pellucid water lolls in its gentle flow, as the blue waves of the Mediterranean upon the steps of her palaces of marble. Occasionally in front of the cliffs, extends a small definite *plateau* of richly herbaged land, affording the most picturesque position for a cottage and garden which the richest imagination could conceive. The windings of the stream are many and abrupt, as is usually the case where banks are precipitous, and thus the impression conveyed to the voyager's eye, as he proceeds, is that of an endless succession of infinitely varied small lakes, or, more properly speaking, tarns. The Wissahiccon, however, should be visited, not like "fair Melrose," by moonlight, or even in cloudy weather, but amid the brightest glare of a noonday sun; for the narrowness of the gorge through which it flows, the height of the hills on either hand, and the density of the foliage, conspire to produce a gloominess, if not an absolute dreariness of effect, which unless relieved by a bright general light, detracts from the mere beauty of the scene.

Not long ago I visited the stream by the route described, and spent the better part of a sultry day in floating in a skiff upon its bosom. The heat gradually overcame me, and, resigning myself to the influence of the scenes and of the weather, and of the gently moving current, I sank into a half slumber, during which my imagination revelled in visions of the Wissahiccon of ancient days—of the "good old days" when the Demon of the Engine was not, when "water pic-nics" were undreamed of, when "water privileges" were neither bought nor sold, and when the red man trod alone, with the elk, upon the ridges that now towered above. And, while gradually these conceits took possession of my mind, the lazy brook had borne me, inch by inch, around one promontory and within full view of another that bounded the prospect at the distance of forty or fifty yards. It was a steep rocky cliff, abutting far into the stream, and presenting much more of the Salvator character than any portion of the shore hitherto passed. What I saw upon this cliff, although surely an object of very extraordinary nature, the place and season considered, at first neither startled nor amazed me—so thoroughly and appropriately did it chime in with the half-slumberous fancies that enwrapped me. I saw, or dreamed that I saw, standing upon the extreme verge of the precipice, with neck outstretched, with ears erect, and the whole attitude indicative of profound and melancholy inquisitiveness, one of the oldest and boldest of those identical elks which had been coupled with the red men of my vision.

I say that, for a few moments, this apparition neither startled nor amazed me. During this interval my whole soul was bound up in intense sympathy alone. I fancied the elk repining, not less than wondering, at the manifest alterations for the worse, wrought upon the brook and its vicinage, even within the last few years, by the stern hand of the utilitarian. But a slight movement of the animal's head at once dispelled the dreaminess which invested me, and aroused me to a full sense of the novelty of the adventure. I arose upon one knee within the skiff, and, while I hesitated whether to stop my career, or let myself float nearer to the object of my wonder, I heard the words "hist!" "hist!" ejaculated quickly but cautiously, from the shrubbery overhead. In an instant afterwards, a negro emerged from the thicket, putting aside the bushes with care, and treading stealthily. He bore in one hand a quantity of salt, and, holding it towards the elk, gently yet steadily approached. The noble animal, although a little fluttered, made no attempt at escape. The negro advanced; offered the salt; and spoke a few words of encouragement or conciliation. Presently, the elk bowed and stamped, and then lay quietly down and was secured with a halter.

Thus ended my romance of the elk. It was a *pet* of great age and very domestic habits, and belonged to an English family occupying a villa in the vicinity.

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